

# DENON



DENO-00263

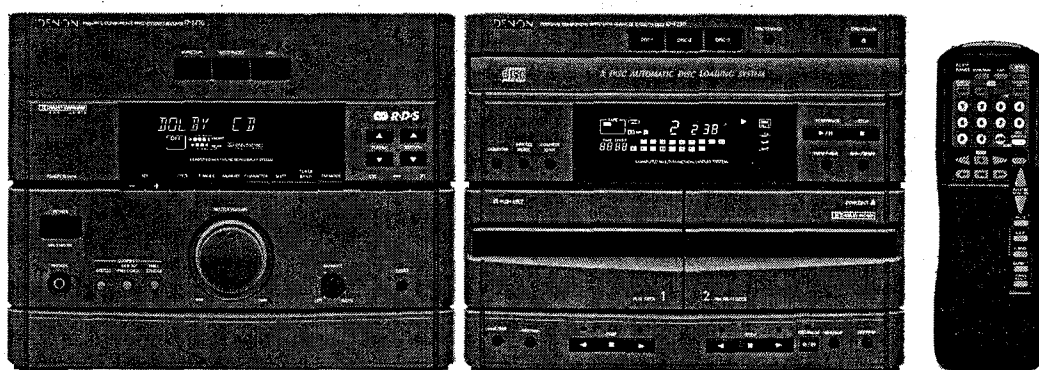
Hi-Fi Personal Component System

## SERVICE MANUAL

# MODEL D-1250/850

### PERSONAL COMPONENT SYSTEM

COMPACT  
**disc**  
DIGITAL AUDIO



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## NIPPON COLUMBIA CO., LTD.

## SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety - related characteristics, always use genuine DENON's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with,  $\Delta$  in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

## SPECIFICATIONS

### • TUNER SECTION

**Reception frequency band:** FM: 87.50 - 108.00 MHz (50 kHz step)  
AM: 522 - 1,611 kHz (9 kHz step)  
[for Europe, U.K.]  
FM: 87.50 - 108.00 MHz (50 kHz step)  
AM: 522 - 1,611 kHz (9 kHz step)  
530 kHz - 1710 kHz (10 kHz step)  
[for Asia]  
FM: 87.90 - 107.90 MHz (200 kHz step)  
AM: 530 - 1,710 kHz (10 kHz step)  
[for U.S.A., Canada]

**Reception sensitivity:** FM: 1.5  $\mu$ V/75 ohms  
AM: 630  $\mu$ V/m

**FM stereo separation:** 35 dB (1 kHz)

**Timer:** Quarts lock daily timer  
(Timer - Sleep/Play/Rec)

### • AMPLIFIER SECTION

**Rated output power (Stereo):** D-1250 : 50 W/channel (6 ohms,  
65 Hz - 15 kHz, THD 1.0%)  
D-850 : 35 W/channel (6 ohms,  
65 Hz - 15 kHz, THD 1.0%)

**Rated output power (Dolby Pro Logic):** [D-1250] [D-850]  
Front L/R: 50 W x 2, 35 W x 2  
Center : 50 W 35 W  
Rear : 15 W x 2, 15 W

**Frequency response:** 20 Hz - 40 kHz (20Hz: -2dB, 40kHz: -3dB)

**Required speaker impedance:** Front L/R: 6 - 16 ohms  
Center/Surround: 6 - 16 ohms

### • CASSETTE DECK SECTION

**Type:** 4-track 2-channel  
stereo auto reverse cassette deck

**Heads:** TAPE 1 : Playback  
TAPE 2 : Recording/Playback

**Tape speed:** 4.75 cm/sec

**Included circuits:** D-1250 : Dolby B and C NR  
D-850 : Dolby B NR

**Usable tapes:** Normal, chrome and metal

### • CD PLAYER SECTION

**Wow and flutter:** Unmeasurable

**Sampling frequency:** 44.1 kHz

**Optical source:** Semiconductor

**S/N ratio:** 90 dB

### • GENERAL SPECIFICATION

**Power supply:** AC230 V, 50 Hz [for Europe, U.K.]  
AC110 V - 120 V / 220V - 240 V,  
50 Hz/60 Hz [for Asia]  
AC120 V, 60 Hz [for U.S.A., Canada]

**Power consumption:** D-1250 : 170 W  
D-850 : 140 W

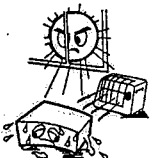

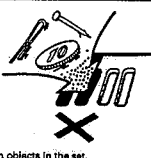

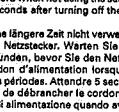
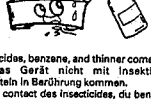
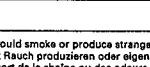
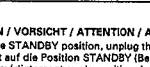

**Dimensions:** UDRA-1250/850:  
270 (W) x 215 (H) x 418 (D) mm  
UWCM-1250/850:  
270 (W) x 215 (H) x 341 (D) mm

**Weight:** UDRA-1250 : 8.3 kg  
UDRA-850 : 7.3 kg  
UWCM-1250 : 5.0 kg  
UWCM-850 : 5.0 kg

\* Dimensions include controls, jacks and covers.  
(W) = width, (H) = height, (D) = depth

• For improvement purposes, specifications and functions are subject to change without advanced notice.

## NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION / NOTE SULL'USO

 <ul style="list-style-type: none"> <li>• Avoid high temperatures. Allow for sufficient heat dispersion when installed on a rack.</li> <li>• Vermeiden Sie hohe Temperaturen. Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.</li> <li>• Eviter des températures élevées. Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.</li> <li>• Evitate di esporre l'unità a temperature alte. Assicurarsi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.</li> </ul>	 <ul style="list-style-type: none"> <li>• Keep the set free from moisture, water, and dust.</li> <li>• Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.</li> <li>• Protéger l'appareil contre l'humidité, l'eau et la poussière.</li> <li>• Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.</li> </ul>	 <ul style="list-style-type: none"> <li>• Do not let foreign objects in the set.</li> <li>• Keine fremden Gegenstände in das Gerät kommen lassen.</li> <li>• Ne pas laisser des objets étrangers dans l'appareil.</li> <li>• E' importante che nessun oggetto è inserito all'interno dell'unità.</li> </ul>
 <ul style="list-style-type: none"> <li>• Handle the power cord carefully. Hold the plug when unplugging the cord.</li> <li>• Gehen Sie vorsichtig mit dem Netzkabel um. Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.</li> <li>• Manipuler le cordon d'alimentation avec précaution. Tenir la prise lors du débranchement du cordon.</li> <li>• Maneggiare il filo di alimentazione con cura. Agitare per la spina quando scollegate il cavo dalla presa.</li> </ul>	 <ul style="list-style-type: none"> <li>• Unplug the power cord when not using the set for long periods of time. Wait approximately 5 seconds after turning off the power before disconnecting the power cord.</li> <li>• Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker. Warten Sie nach dem Ausschalten des Geräts etwa 5 Sekunden, bevor Sie den Netzstecker abziehen.</li> <li>• Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes. Attendre 5 secondes environ après la mise hors tension avant de débrancher le cordon d'alimentation.</li> <li>• Disinnestare il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo. Aspettate circa 5 secondi dopo lo spegnimento prima di staccare il filo di alimentazione.</li> </ul>	 <ul style="list-style-type: none"> <li>• Do not let insecticides, benzene, and thinner come in contact with the set.</li> <li>• Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.</li> <li>• Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.</li> <li>• Assicurarsi che l'unità non venga in contatto con insetticidi, benzolo o solventi.</li> </ul>
 <ul style="list-style-type: none"> <li>• Place the unit on a flat, even surface not subjected to vibration.</li> <li>• Stellen Sie das Gerät auf eine ebene, vibrationsfreie Unterlage.</li> <li>• Poser l'appareil sur une surface plane et uniforme, à l'abri des vibrations.</li> <li>• Poggiate l'apparecchio su una superficie piana ed uniforme, non soggetta a vibrazioni.</li> </ul>	 <p>*(For sets with ventilation holes)</p> <ul style="list-style-type: none"> <li>• Do not obstruct the ventilation holes. Place the unit 10 cm clear from the wall.</li> <li>• Die Belüftungsöffnungen dürfen nicht verdeckt werden. Der Abstand zwischen dem Gerät und der Wand muß mindestens 10 cm betragen.</li> <li>• Ne pas obstruer les trous d'aération. Placer l'appareil à 10 cm du mur.</li> <li>• Non coprire i fori di ventilazione. Collocare l'apparecchio a 10 cm dal muro.</li> </ul>	 <ul style="list-style-type: none"> <li>• Never disassemble or modify the set in any way.</li> <li>• Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.</li> <li>• Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.</li> <li>• Non smontare mai, né modificare l'unità in nessun modo.</li> </ul>

## CAUTION / VORSICHT / ATTENTION / AVVISO

- If the system should smoke or produce strange smells, immediately set the power switch to the STANDBY position, unplug the power cord, and contact your store of purchase.
- Sollte das Gerät Rauch produzieren oder eigenartig riechen, stellen Sie den Netzschalter sofort auf die Position STANDBY, ziehen Sie den Netzstecker heraus und kontaktieren Sie Ihren Händler.
- Si de la fumée sort de la chaîne ou des odeurs bizarres, placer l'interrupteur d'alimentation immédiatement sur la position de veille (STANDBY), débrancher le cordon d'alimentation et contacter le distributeur.
- Qualora il sistema dovesse produrre del fumo o degli odori strani, collocare immediatamente l'interruttore di accensione nella posizione STANDBY, disinnestare il filo di alimentazione e rivolgetevi al negozio dell'acquisto.

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## IDENTIFICATION OF CONTROL / BEDIENUNGSELEMENTE / DESIGNATION DES COMMANDES / IDENTIFICAZIONE DEI COMANDI

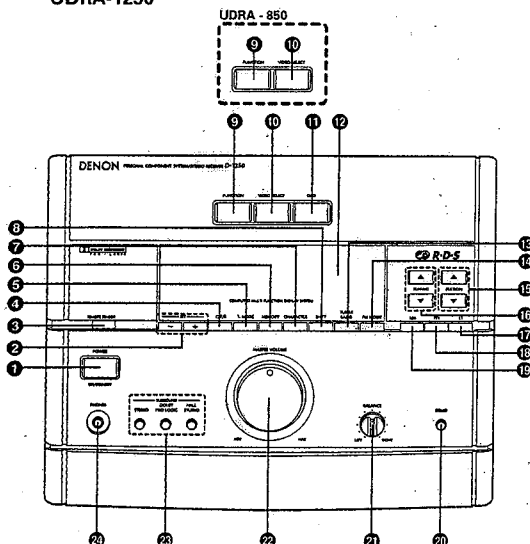
STEREO RECEIVER FRONT PANEL  
FRONTPLATTE STEREOEMPFAßER  
PANNEAU AVANT DE L'AMPLI-TUNER STEREO  
PANNELLO ANTERIORE DEL SINTOAMPLIFICATORE STEREO

See ENGLISH Page 11  
Sehen Sie DEUTSCH Seite 47  
Voir FRANÇAIS Page 83  
Fate riferimento alla sezione ITALIANO alla pagina 119

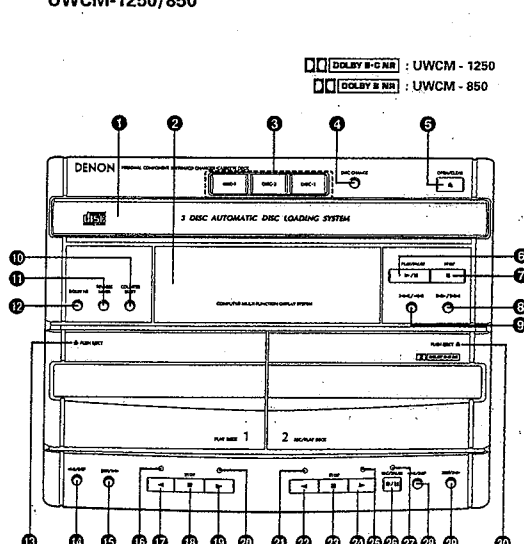
CD CHANGER-CASSETTE DECK FRONT PANEL  
FRONTPLATTE CASSETTENECK MIT CD-WECHSLER  
PANNEAU AVANT DU CHANGEUR DE CD-PLATINE CASSETTE  
PANNELLO ANTERIORE DEL CAMBIA-CD/PIASTRA A CASSETTE

See ENGLISH Page 12  
Sehen Sie DEUTSCH Seite 48  
Voir FRANÇAIS Page 84  
Fate riferimento alla sezione ITALIANO alla pagina 120

UDRA-1250



UWCM-1250/850



- As an aid to better understanding the operation method, the illustrations used in this manual may differ from the actual system.
- Als Hilfestellung zum besseren Verständnis der Betriebsmethode, erlauben wir uns den Hinweis, daß sich die Abbildungen in dieser Bedienungsanleitung leicht von dem aktuellen System unterscheiden.
- Pour faciliter la compréhension de la méthode de fonctionnement, les illustrations utilisées dans ce manuel peuvent être différentes de celles de la chaîne réelle.
- Per rendere la spiegazione del metodo operativo più facile, le illustrazioni usate in questo libretto delle istruzioni possono differire dal sistema stesso.

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## 1 MAIN FEATURES

- Easy Operation by On-Screen Display (For D-1250 Only)  
System Setting Menu is displayed on your TV (monitor) screen.
- RDS compatible  
Compatible with various RDS services, including program service name (PS), program type identification (PTY), radio text (RT) and clock time (CT).
- Quality power for high quality sound  
50W + 50W (8Ω/ohms, 1kHz, THD 1%) high quality amplifier and terminals for large speakers. (For D-850: 35W + 35W)
- High sound quality, multi-function 3-DISC CD auto changer  
Edit function for automatically dividing the tracks on a CD for recording onto sides A and B of a tape.
- Cassette deck with Dolby B and C NR (For D-850: Dolby B NR)  
For playback and recording of high quality sound.
- Two types of timers  
Two timer settings can be made everyday and sleep.
- Easy-to-use remote control unit
- Auto on function  
The power turns on automatically and playback begins when the PLAY button on the CD player or the cassette deck, or the TUNER BAND button is pressed.

## 2 BEFORE USING

### Accessories

Check that the following parts are included in the package aside from the main unit:

- ① Operating instructions.....1
- ② AM Loop Antenna.....1
- ③ Remote control unit (RC-810 or RC-811).....1
- ④ R/P / AA batteries.....2
- ⑤ RCA Pin-Plug Cord.....1

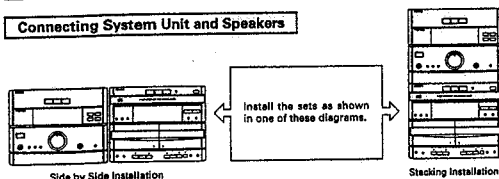
### Notices to Users

Read the following before using the system.

- Before turning on the power  
Check again that all connections are correct and that there are no problems with the connection cords. Be sure to unplug the power cord before connecting or disconnecting the connection cords.
- Humming  
Humming may be produced if this system is set near a TV or other audio equipment. If this happens, try changing the position of the equipment or the connection cords.
- Moving the system  
Be sure to remove CDs before moving the system. If a CD is left in the CD player, it may be scratched. To prevent short-circuits or damage to the connection cords, always unplug the power cord and disconnect all connection cords to other audio equipment.
- Condensation (dew)  
Condensation (water droplets) may be produced on internal optical lenses or discs in the following cases.
  - Directly after a heater is turned on.
  - When the system is in a steamy or humid room.
  - When the system is moved abruptly from a cold place (room) to a warm room.
- Should condensation occur  
The signals on the disc cannot be read and the system will not function properly. Remove the disc then let the system set with the power on. The condensation will evaporate in one hour or less, at which time the system will function normally.
- Illustrations on this manual  
Note that some of the illustrations used for explanations in this manual may differ from the actual system.

## 3 CONNECTIONS

### Connecting System Unit and Speakers

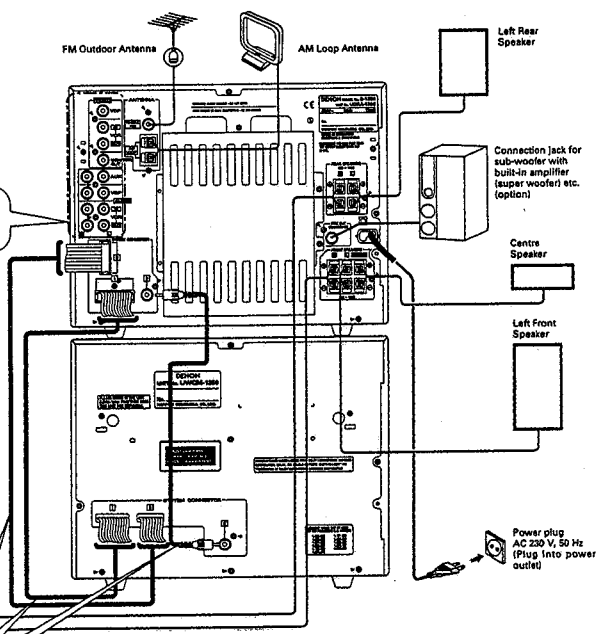


**CAUTION:**  
Whenever the power switch is in the STANDBY position, the unit is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.

**NOTE:**  
This system includes digital circuitry which may cause interference such as color blotching or changes in the color on TVs. If this happens, move the system and the TV as far apart as possible.

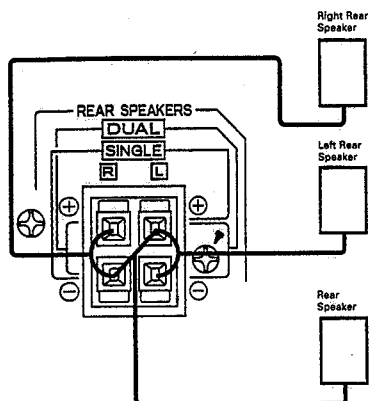
**Connecting the speaker systems**  
Connect the speaker system for the left channel (the left side as seen from the front) to the "L" terminals, the speaker system for the right channel to the "R" terminals. Be sure to use speaker systems with an impedance of 8Ω / ohms or greater. Be sure to connect the speaker cords between the speaker terminals and the speaker systems with the same polarities (Red to +, Black to -).

**System operations**  
Such system operations as the timer and the auto on functions, as well as remote control operations cannot be performed unless all the RCA pin-plug cords and system connector cords are connected between the units.  
• Be sure to make all the connections properly as shown in the diagram.  
• Also, disconnecting system connectors while the system is operating may result in malfunction.  
• Be sure to turn unplug the power cord before changing connections.



- NOTES:**
- Do not plug the power cord into the power outlet until all connections are completed.
  - Insert the plugs securely. Incomplete connections may result in noise.
  - If black (-) and red (+) wires are connected wrongly and the polarities are switched, the sound at the center will be weak, the position of the different instruments will be unclear, and the stereo effect will be lost.
  - Before unplugging the power cord, wait about 5 seconds after turning off the POWER button.
  - Note that setting the connection cords (pin-plug cord) next to the power cords may result in humming or other noise.
  - Do not connect the antenna terminal to the gas pipe. It is extremely dangerous.

## D-850

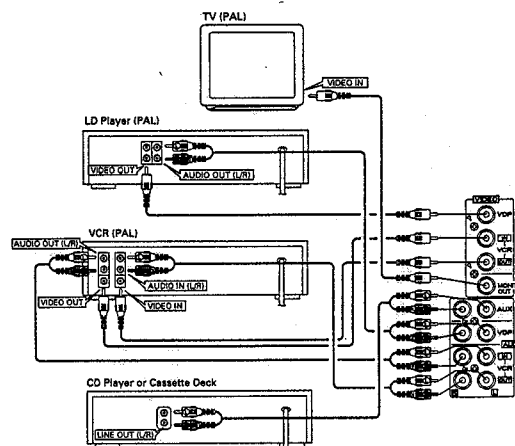
**DUAL**

When two speakers are connected as dual rear outputs, a better effect will be obtained when speakers having uniform characteristics are used.

**SINGLE**

For a single rear speaker output (when using only one speaker for the rear channel), connect the speaker to the (L) (left) "+" terminal and the (R) (right) "-" terminal.

## Connecting to External Equipments (Example)



## NOTE:

D-1250 is provided with OSD function (see page 37.) This OSD is compatible with PAL system. If your LD player or VCR which is connected to D-1250 is not compatible with PAL system, the picture may not be shown properly.

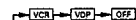
## Selecting AUDIO Input

To select AUDIO Input, press FUNCTION button. Each time you press the FUNCTION button the input mode will be changed as follows. (See page 14 for the details.)



## Selecting VIDEO Output

To select which input VIDEO picture (VCR or VDP) to output, press V.SELECT button on the remote control unit. Each time you press the V.SELECT button, the output selection will be changed as follows.

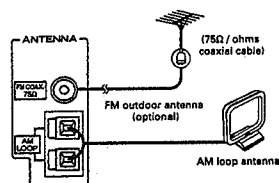


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## Connecting to Antennas (Attached)

## Connecting an FM outdoor antenna

If good reception cannot be achieved with the included FM antenna, use an FM outdoor antenna. Connect an F-shaped connector to the coaxial cable and connect the antenna to the FM COAX (75 Ω) terminal.



## Selecting a place for the FM outdoor antenna

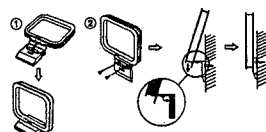
- Set the antenna so that it is pointing towards the broadcast station's transmitting antenna. Behind buildings or mountains, set the antenna in the position at which reception is best and also try changing the direction of the antenna.
- Do not install the antenna under power lines. Doing so is extremely dangerous, as the power line could touch the antenna.
- Install the antenna away from roads or train tracks to avoid noise from cars or trains.
- Do not install the antenna too high, as it may be hit by lightning.

## Installing the AM loop antenna

Tune to an AM station (see Page 18) and set the antenna in a position as far from the system as possible in which distortion and noise is minimum. In some cases it is best to invert the polarities AM broadcasts cannot be received well if the loop antenna is not connected or if it is set close to metal objects.

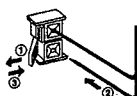
## Assembling the AM loop antenna

- ① To stand the antenna fix the claw to the slot.
- ② To permanently fix the antenna, screw the claw to a wall or something similar.



## Connecting the AM loop antenna

- ① Press the tab back.
- ② Insert the antenna wire.
- ③ Return the tab to its original position; check that the cords are inserted firmly.



9

#### 4 HOW TO SET THE REMOTE CONTROL UNIT

The D-1250 and D-850 come with a system remote control unit RC-810 and RC-811 respectively.

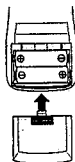
##### Inserting the Batteries

- NOTES:**
- Use R6P (AA) batteries in this manual unit.
  - Replace the batteries with new ones approximately once each year, though this depends on how frequently the remote control unit is used.
  - Replace the batteries with new ones earlier if the remote control unit does not operate even from a short distance.
  - Insert the batteries in the proper + and - direction, following the marks in the battery compartment.
  - Remove the batteries when not using the remote control unit for extended periods of time.
  - To avoid damage and leakage:
    - Do not use a new battery with an old one.
    - Do not use two different types of batteries.
    - Do not short-circuit, take apart, heat or dispose of batteries in flames.
  - If the batteries should break/leak, carefully wipe the fluid out of the battery compartment, then insert new batteries.

1. Open the battery compartment cover on the back of the remote control unit. Press and slide down the cover in the direction of the arrow.



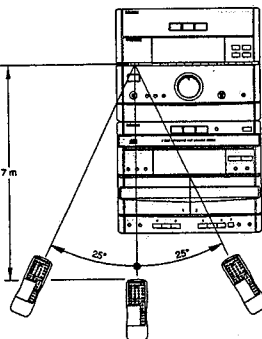
2. Insert the two R6P (AA) batteries, following the + and - marks in the battery compartment.
3. Close the cover of the battery compartment.



##### Using the Remote Control Unit

###### CAUTION ON USE

- The remote control unit may not operate if the remote sensor is exposed to direct sunlight or the strong light from a lighting fixture, or if there is an obstacle between the remote control unit and the remote sensor.
- Do not press buttons on the remote control unit and on the set at the same time. Doing so could result in a malfunction.
- If the remote control unit is pointed away from the remote sensor during continuous operations (such as when turning the volume up or down), the operation will stop. If this happens, point the remote control unit at the remote sensor and press the button again.



- The remote sensor is located on the stereo receiver. Point the remote control unit at the remote sensor as shown on the diagram when operating it. The remote control unit will operate from a direct distance of approximately 7 meters, but this distance will be shortened if obstacles are present or if operated at an angle. (The remote control unit will operate at an angle of up to 25° in either direction.)

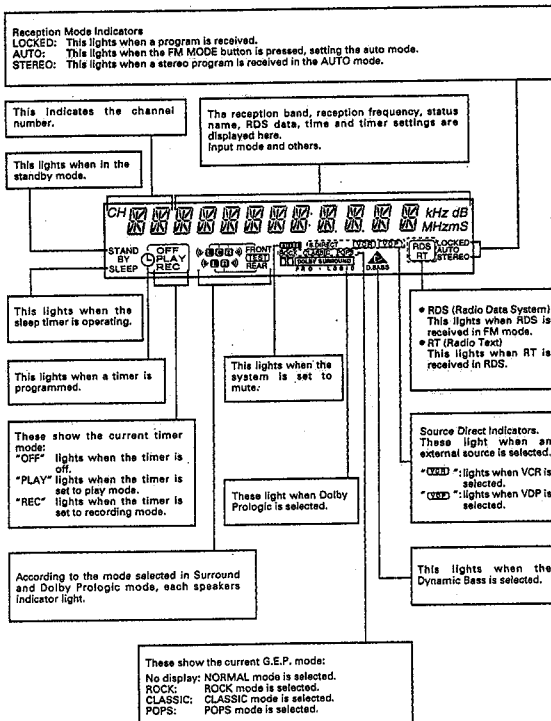
10

#### 5 PART NAMES, FUNCTIONS AND DISPLAYS

##### STEREO RECEIVER

1. **POWER button**  
(This turns the power for the entire system on and off.)  
Press this once to turn the power on, then press again to set the power to the standby mode.
2. **SET (-, +) button**  
Press this when setting the timer and to turn the timer on so that it operates at the set times.
3. **REMOTE SENSOR**  
When operating the remote control unit, point it at this sensor.
4. **CT/TS (CLOCK/TIMER/SLEEP) button**  
Use this button to set the clock, timer-controlled and sleep functions.
5. **T.MODE button**  
Press this button to set the timer mode function to off, play or record.
6. **MEMORY button**  
This button is used to preset AM and FM stations.
7. **CHARACTER button**  
Use this button to enter the AM and FM stations name.
8. **SHIFT button**  
Use this button to select the memory blocks of the preset stations, A (1 to 8), B (1 to 8), C (1 to 8) or D (1 to 8).
9. **FUNCTION (input) selector button**  
Use this button to select the input (function). The input changes in the following order each time this button is pressed: CD, TAPE, TUNER, AUX, VCR, VDP. (The function changes automatically when the system's CD player or cassette deck is played or the TUNER BAND button is pressed.)
10. **VIDEO SELECT button**  
Press this button to select VIDEO output terminal, VDP or VCR, to output picture to the TV (monitor).
11. **OSD button (For D-1250 only)**  
Press this button to show the System Setting Menu on your TV (monitor) screen.
12. **Display**
13. **TUNER BAND button**  
Use this button to select AM or FM band.
14. **FM MODE selector button**  
**AUTO mode:**  
Use this mode to receive programs in stereo. The sound and the indicators on the display automatically switch between monaural and stereo ("STEREO") according to whether the program is being broadcast in monaural or stereo.  
**MONO mode:**  
Use this mode to receive programs in monaural, regardless of whether they are being broadcast in monaural or stereo. Set this mode if there is much noise or if the signals are weak when receiving stereo programs (when "AUTO" is lit).
15. **STATION (▲) and (▼) buttons**  
Press these buttons to select preset AM and FM stations.
16. **TUNING (▲) and (▼) buttons**  
Press these buttons to select AM and FM stations.
17. **RT (Radio Text) button**  
Press this button to show Radio Text on the display while "RT" indicator lights.
18. **PTY (Program Type) button**  
Press this button to select one of the 15 program types in RDS.
19. **RDS button**  
Use this button to automatically tune to FM stations using the radio data system.
20. **DEMO button**  
Use this button to show the demonstration pattern on the display.
21. **BALANCE control**  
Use this to adjust the balance of the volume between the left and right channels.
22. **MASTER VOLUME control**  
Use this to adjust the overall volume.
23. **SURROUND control buttons**  
**STEREO button**  
Press this button to select STEREO mode.  
**DOLBY PROLOGIC button**  
Press this button to select NORMAL, PHANTOM, WIDE or 3CH LOGIC mode.  
**HALL STUDIO button**  
Press this button to select HALL or STUDIO mode.  
• The surround effect cannot be given to a monaural.
24. **PHONES (headphones jack)**  
Plug the headphones into this jack. No sound is produced from the speakers when headphones are plugged in.

##### STEREO RECEIVER DISPLAY



###### NOTE:

- The timer standby mark ("G") does not light if the current time and the timer have not been set.

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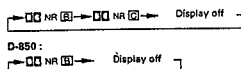
## CD CHANGER-CASSETTE DECK

## CD Block

- 1 Disc tray  
Load discs here.
- 2 Display
- 3 DISC selection buttons  
Press any of the buttons to select the desired disc to be played.
- 4 DISC CHANGE button  
Open the disc tray and press this button to rotate the tray after placing two discs. Place the next disc on the empty tray. Each time the DISC CHANGE button is pressed, the tray rotates and one disc can be placed or changed.
- 5 OPEN/CLOSE (Δ/▽) button  
Press this to open and close the disc tray. When pressed once, the disc tray opens out, and when pressed again, the disc tray closes.
- 6 PLAY/PAUSE (▶/||) button  
Press to begin play; the Play Indicator will light. Press during play to temporarily stop play; the Pause Indicator will light. Press this button to resume play at the point where it was paused. When pressed in the standby mode, the power automatically turns on and playback begins. (Auto on function)
- 7 STOP (■) button  
Press this button to stop playback.
- 8 (Automatic/Manual Search Forward) button  
Use this to move to the beginning of a specific track. When pressed during playback or in the pause mode, the pickup moves forward a number of tracks equal to the number of times the button is pressed.  
\* The automatic search mode is set if the ③ or ④ button is released within 0.5 seconds, and the manual search mode is set if the button is held for over 0.5 seconds.
- 9 (Automatic/Manual Search Reverse) button  
Use this to move to the beginning of a specific track. When pressed during playback or in the pause mode, the pickup moves backward a number of tracks equal to the number of times the button is pressed.

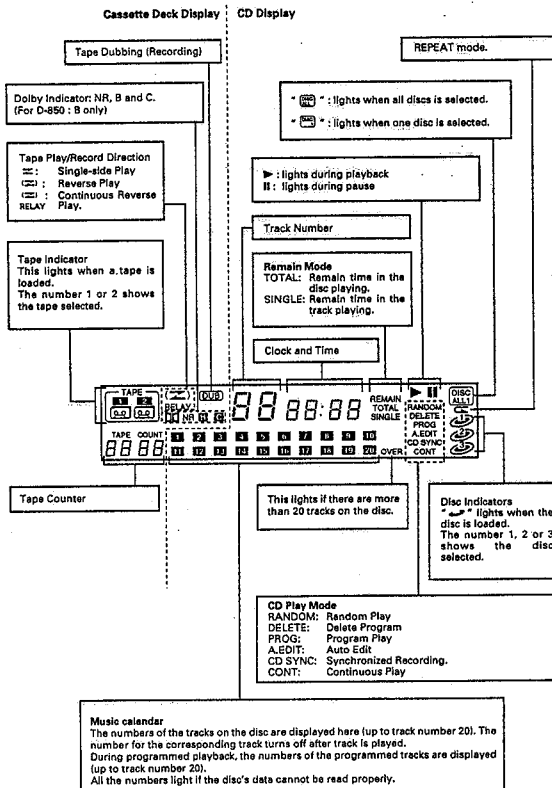
## Cassette Deck Block

- 10 COUNTER RESET button  
Press this button to reset the tape counter to "0000".
- 11 REVERSE MODE button  
Use this to select the direction of tape travel. For details refer to Page 23.
- 12 DOLBY NR Mode button  
Use this to select the Dolby NR mode (OFF, B or C).

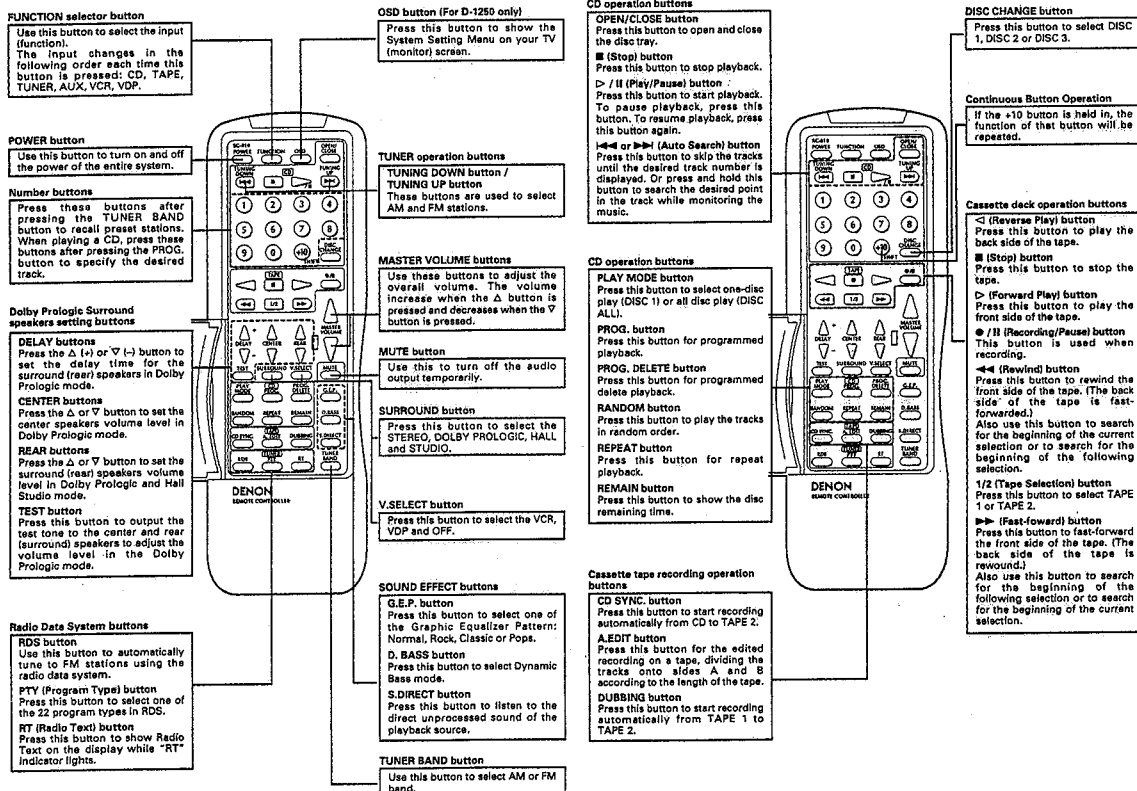


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## CD CHANGER-CASSETTE DECK DISPLAY



## Remote Control Unit Part Names and Functions

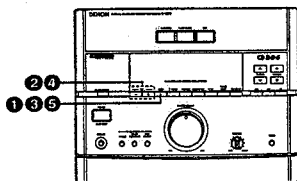


13

## 6 SETTING THE CURRENT TIME

Before the timer-controlled functions can be used the clock must be set to the current time.

The time is displayed in the 24-hour mode.



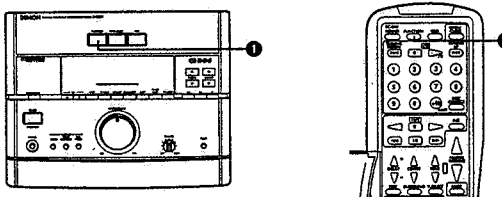
Example: Setting to 19:30

1	Press the C/T/S button.		CLOCK ---
2	Use the SET - or + button to set the hours.		19:00 The hours place flashes.
3	Press the C/T/S button.		19:00 The minutes place flashes.
4	Use the SET - or + button to set the minutes.		19:30 The minutes place flashes.
5	Press the C/T/S button. The time display stops flashing and the clock starts running.		19:30 The display stops flashing and the clock starts running from 00 seconds.

• The current time can be set even when the power is off.

## 7 HOW TO SELECT THE INPUT (AUDIO SOURCE)

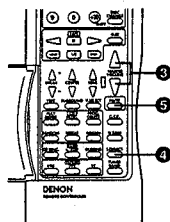
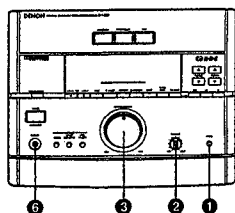
You can select the Audio Source from CD, TAPE, TUNER, AUX, VCR and VDP. To listen to the audio source from AUX, VCR and VDP, these external equipment should be connected properly in advance. (See page 8)



1	Press the FUNCTION button to select the desired input (audio source).		IN CD ↓ IN TAPE ↓ IN TUNER ↓ IN AUX ↓ IN VCR ↓ IN VDP
---	---	--	---

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## 8 SOUND ADJUSTMENT



### DEMONSTRATION Mode

1	The demo mode demonstrates the graphic equalizer and Dolby Pro Logic features. Press the DEMO button to engage the mode and press it again to cancel it. NOTE: • The demo mode will continually repeat itself until cancelled.	
---	--	--

### Adjusting BALANCE between the left and right speakers

2	Use the BALANCE control to adjust the left and right channel balance. Turn and hold it to the left to decrease the R channel volume, or to the right to decrease the L channel volume. When set at the center position, the volume is the same for the left and right channels.	
---	---	--

### Adjusting the MASTER VOLUME

3	Turn the MASTER VOLUME control. The volume increases when the control is turned clockwise (↻) and decreases when it is turned counterclockwise (↺). Volume can also be adjusted with MASTER VOLUME Δ and ∇ buttons on the remote control.	
---	---	--

### SOURCE DIRECT Mode

4	Press the S.DIRECT button on the remote control unit to engage the source direct mode. The "S.DIRECT" indicator will light on the display to indicate that the mode is engaged. Press the S.DIRECT button again to cancel the mode. Use this function to bypass the Graphic Equalizer and Dynamic Bass when you want to listen to the direct, unprocessed sound of the playback source.		STEREO CD
---	---	--	-----------

• SOURCE DIRECT Mode is available only when STEREO Mode is selected.

### MUTE

5	Press the remote control's MUTE button to instantly lower the volume. The "MUTE" indicator will light on the display. Press it again to cancel the mute mode. NOTE: • Mute does not completely cancel sound output. Depending on the volume setting when engaged, some sound may still be heard. • Mute is cancelled when the power is turned off.		MUTE Flashes
---	---	--	-----------------

### Connecting the Headphones

6	Connect headphones to the PHONES jack and adjust the volume with the MASTER VOLUME control.	
---	---	--

NOTE:  
• Avoid listening with headphones at high volumes for an extended period of time, as it may affect your hearing.

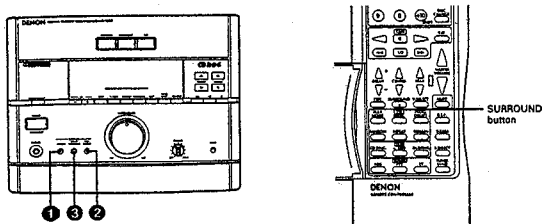
15

## 9 SURROUND MODE

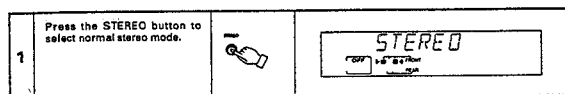
Select one surround mode from the following mode:

- STEREO
- DOLBY PRO LOGIC: NORMAL, PHANTOM, WIDE or 3CH PRO LOGIC
- HALL STUDIO: HALL or STUDIO

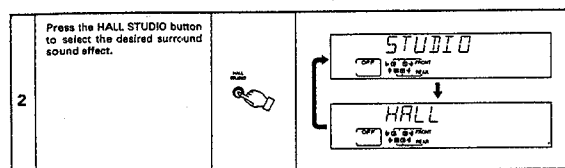
by pressing STEREO, DOLBY PRO LOGIC, or HALL STUDIO button, or pressing the SURROUND button on the remote control unit.



### STEREO Mode



### HALL STUDIO Mode

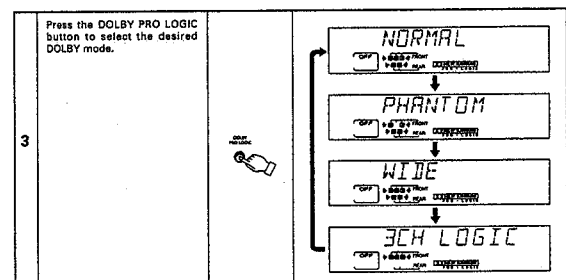
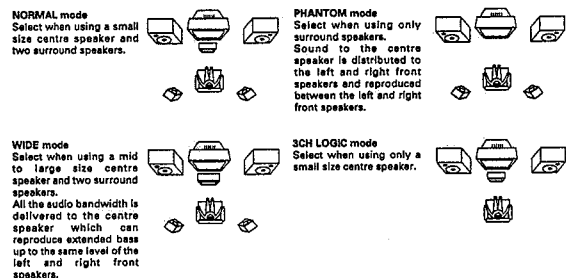


## 10 DOLBY PRO LOGIC

This system features a built-in Dolby Pro Logic surround decoder which functions to re-create the effect of sound movement and sound position. The benefit to the listener is a realistic three dimensional sound listening experience. The effects of Dolby Pro Logic will only be noticeable with Dolby surround encoded sound sources.

### Dolby Pro Logic Modes

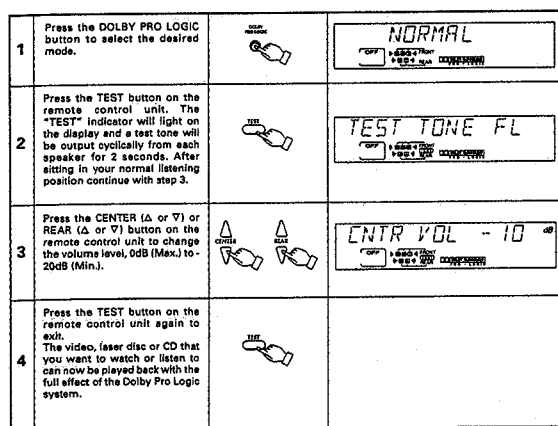
There are 4 different modes which are selected according to the speaker set up that you are using. We recommend the use of DENON centre and surround speakers.



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### Adjusting Speaker Volume Level

Before using Dolby Pro Logic adjust the volume level of the center and two surround speakers. Before proceeding, use the BALANCE control to adjust the Left and Right speaker balance according to your listening position.

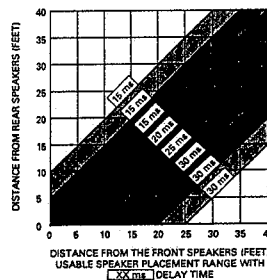
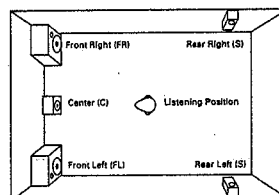


NOTE:  
• Test tone adjustment only needs to be redone if you change your listening position or change the speakers being used.

Manufactured under license from Dolby Laboratories Licensing Corporation.

DOLBY, the double-D symbol and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

### Delay Time



The optimum delay time will differ depending on the listening position. Referring to the chart at the left, set the optimum delay time for your room's space and seating position. For example, when the distance from the front speakers to the listening position is 20 feet and that from the rear speakers to the listening position is 15 feet, the optimum delay time will be 20 ms. The variable range of the delay time differs depending on the mode.

■ PREPARED  
▨ ACCEPTANCE  
□ NOT RECOMMENDED

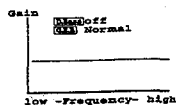
17

## 11 GRAPHIC EQUALIZER OPERATION

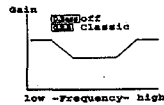
### G.E.P. (Graphic Equalizer Pattern)

According to the music you are listening to you can select the suitable Graphic Equalizer Pattern.

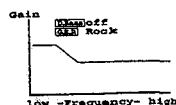
**NORMAL**  
No additional adjustment to the volume level.



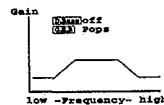
**CLASSIC**  
Volume level of low and high frequency ranges are increased.



**ROCK**  
Volume level of low frequency range is increased.

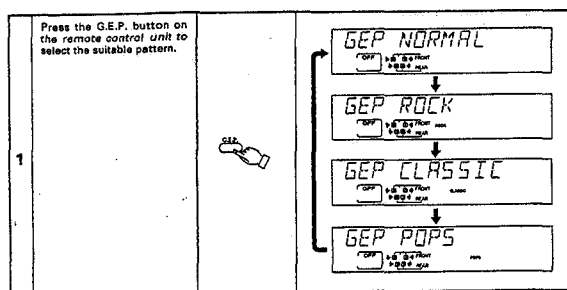


**POPS**  
Volume level of low and high frequency ranges are reduced.



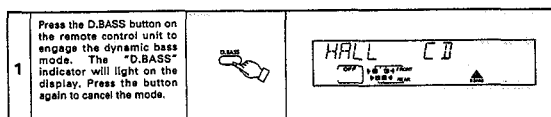
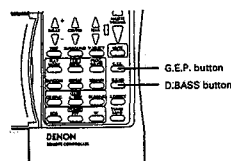
#### NOTES:

- The graphic equalizer effect will not be added during recording.
- When graphic equalizer frequencies are set to high levels, raising the volume excessively may result in distorted sound. If the sound becomes distorted, reduce the volume to a more appropriate level.

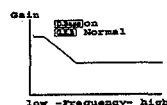


### DYNAMIC BASS Mode

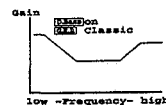
You can increase the volume level of the low frequency range by selecting Dynamic Bass mode.



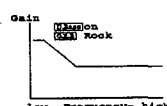
#### NORMAL



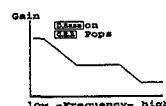
#### CLASSIC



#### ROCK



#### POPS

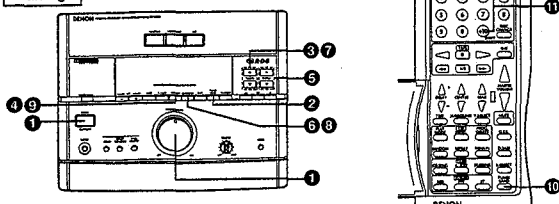


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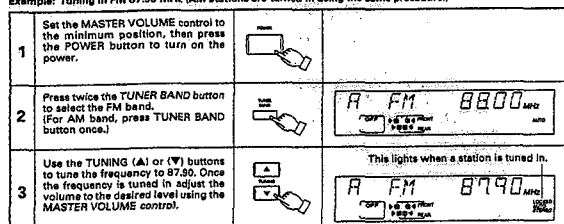
## 12 LISTENING TO RADIO PROGRAMS

(Check the connections on Pages 7 and 9.)

### Tuning



Example: Tuning in FM 87.90 MHz (AM stations are tuned in using the same procedure.)

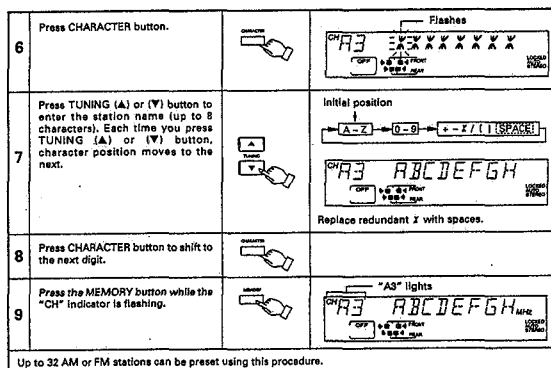
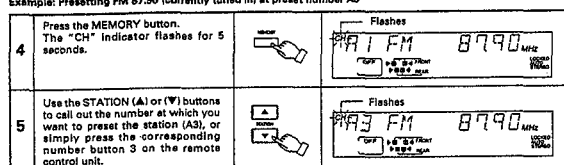


#### Auto Tuning

- When one of the TUNING buttons is pressed, the frequency changes in steps of 50kHz in the FM band, 9 kHz in the AM band.
- If one of the TUNING buttons is held in for over 1 second, the frequency continues to change when the button is released (auto tuning) and stops when a station is tuned in. Tuning will stop at stations whose reception is poor.
- To stop the auto tuning function, press the (A) or (V) button once.

### Presetting AM and FM Stations

Example: Presetting FM 87.90 (currently tuned in) at preset number A3



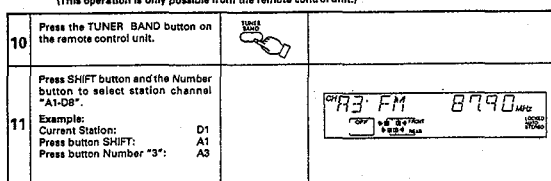
#### NOTES:

- In addition to the reception frequency, the reception mode (monaural or auto) is also preset, so check the display when presetting stations.
- If a station is preset at a number where a station is already preset, the previous station is replaced with the new station.
- If PS data is provided in RDS (if the station name is provided already by the broadcaster), you cannot change the station name.
- The preset memory is not cleared immediately when the power cord is unplugged, but is cleared if the cord is left unplugged for an extended period of time. If this happens, preset the stations again.
- Station name or frequency is displayed cyclically by pressing CHARACTER button.

### Listening to Preset Stations

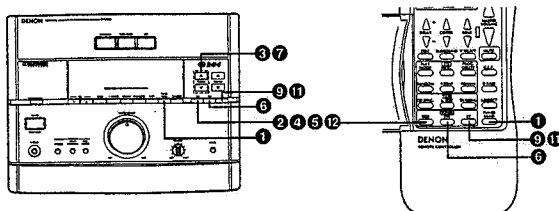
The preset stations can be recalled using the number buttons on the remote control unit. Also, if the following operation is performed when the system power is off, the power automatically turns on and the radio is played. (Auto on function)

Example: Listening to the station preset at number A3  
(This operation is only possible from the remote control unit.)



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## Using the RDS Functions



RDS (Radio Data System) Search (FM only)  
Using this function, you can search RDS broadcasts automatically among the FM stations.

1	Press the TUNER BAND button and set the FM band.		
2	Press the RDS button once.		
3	Press the TUNING (A) or (V) button. Searching begins automatically.		
4	The station is tuned in.		

Once the station is tuned in, the program service name is displayed.

NOTE: If no RDS station is found, or the signals are weak, "NO RDS" is displayed.

## PTY (Program Type) Search

Using this function, you can search RDS broadcasts automatically according to the Program type you selected.

5	Press the RDS button twice.		
6	Press the PTY button to select the type of program. (One of the 15 types listed below can be selected.)		
7	Press the TUNING (A) or (V) button.		
8	The station is tuned in.		

Once the station is tuned in, the program service name is displayed.

NOTE: If no program of the specified type is found, "NO PROGRAM" is displayed.

## Programs

PTY NEWS	(News)	PTY VARIED	(Varied)
PTY AFFAIRS	(Current Affairs)	PTY POP M	(Pop Music)
PTY INFO	(Information)	PTY ROCK M	(Rock Music)
PTY SPORT	(Sport)	PTY M.O.R. M	(M.O.R. Music)
PTY EDUCATE	(Education)	PTY LIGHT M	(Light Classics)
PTY DRAMA	(Drama)	PTY CLASSICS	(Serious Classics)
PTY CULTURE	(Culture)	PTY OTHER M	(Other Music)
PTY SCIENCE	(Science)		

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## RT (Radio Text) Search

Receiving RT (Radio Text) broadcasts.

If RT (Radio Text) is received while receiving RDS broadcasts, RT indicator lights.

9	Press the RT button while "RT" indicator lights.		
10	The text will scroll on the display from right to left.		
11	Press the RT button to exit. "RT OFF" disappears after 5 seconds.		

NOTES: • "NO TEXT DATA" is displayed when there is no text data broadcasted.  
• If the RT data is long and it takes a several seconds to receive a frame of the data, "J" may be displayed on your unit.

## Receiving FM programs in stereo

- Press the FM MODE selector button to turn on the "AUTO" indicator. When a program being broadcast in stereo is received, the "STEREO" indicator lights and the program is received in stereo.
- If reception is poor and there is much noise in the stereo signals, press the FM MODE selector button to set the monaural mode.

## NOTE:

- A humming sound may be heard when using a TV nearby while receiving AM programs. If this happens, move the system as far from the TV as possible.

## CT (Clock Time)

Clock is displayed according to the RDS clock data.

12	Press the RDS button 3 times.		
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Show the current time for 5 seconds.

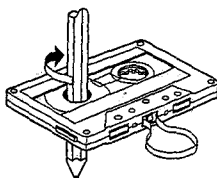
NOTE: "NO CT DATA" is displayed when there is no clock broadcasted.

21

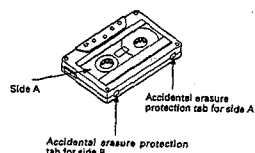
# 13 BEFORE RECORDING AND PLAYING TAPES

## About Cassette Tapes

- Cautions on handling cassette tape
  - C-120 cassette tapes
  - C-120 (120-minute) cassettes use very thin tape which can easily get caught on the capstans and pinch rollers. We recommend not using C-120 tapes.
  - Tape slack
  - If the tape is slack, it may get caught in the mechanism and damaged. Take up any slack in the tape with a pencil, etc., before loading the cassette.



- Preventing accidental erasure
  - Cassette tapes have tabs for preventing accidental erasure. Use a screwdriver, etc., to break off the tabs to prevent recordings from being accidentally erased.
  - To record on a tape whose tabs have been broken, place a piece of cellophane tape, etc., over the tab holes.

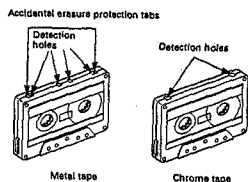


- Notes on storing cassette tapes
  - Avoid placing cassette tapes in the following types of places:
    - Hot or humid places
    - Dusty places
    - Places exposed to direct sunlight
    - Near magnetic sources (TVs, speakers, etc.)
  - Store cassette tapes in cases with stoppers to prevent the tape from getting slack.

## Auto Tape Selector Mechanism

These decks are equipped with an auto tape selector mechanism which uses the detection holes in the cassette helices to detect the type of tape and automatically set the most appropriate recording bias and equalization for that type of tape.

- Do not use ferrichrome tapes.
- When an old metal tape with no detection holes is used, the treble will be stressed excessively, so use metal tapes with detection holes.

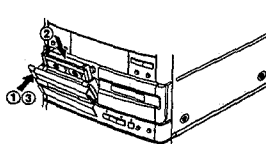


## Loading and Unloading Cassette Tape

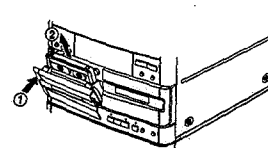
### NOTE:

- Load cassette tapes with the side on which the tape is exposed facing downward. Loading them the other way may result in damage.

- Loading
  - 1 Press the  $\Delta$  PUSH EJECT position of the cassette door: The cassette door opens.
  - 2 Load the cassette tape in the cassette compartment as shown on the diagram below, with the side on which the tape is exposed facing downward.
  - 3 Press the  $\Delta$  PUSH EJECT position of the cassette door to close.



- Unloading
  - 1 Press the  $\Delta$  PUSH EJECT position of the cassette door.
  - 2 Remove the tape.



Check the following before recording or playing cassette tapes:

1. Are the heads dirty? ..... The sound quality will be poor if the heads are dirty. Refer to Page 40.
2. Are the accidental erasure protection tabs broken off? ..... Recording is not possible if the accidental erasure protection tabs on the top of the cassette are broken off. Refer to Page 22.

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## Using the Auto Reverse Function

These decks are equipped with an auto reverse function, so the tape can be played or recorded on both sides or played continuously without removing the cassette.

### Direction of tape travel

These decks are equipped with two play buttons, one for the forward direction (front side) and one for the reverse direction (back side). If the button for the opposite direction is pressed during playback, playback switches to the other side.

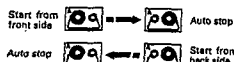
The front side is the side facing toward you when the tape is loaded in the cassette compartment.

### Reverse mode

There are three reverse modes, as described below.

#### Single-sided recording/playback mode ( $\equiv$ )

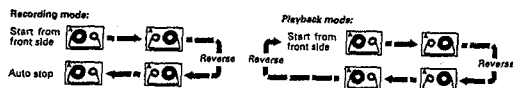
Use this to record or play only the front or back side. (The stop mode is set automatically when the end of that side of the tape is reached.)



#### Double-sided recording/playback mode ( $\equiv$ )

In this mode, when the end of the front side of the tape is reached during recording or playback, the tape automatically switches to the back side and playback or recording continues.

**Recording mode:** The stop mode is set automatically when the end of the tape on the back side is reached. **Playback mode:** Playback continues until the stop button is pressed. (The tape deck stops automatically after having played 16 times both side A and B.)



\* When started from the back side, only the back side is recorded.

#### Continuous play mode ( $\equiv$ , RELAY )

In this mode, playback continues until the stop button is pressed. (The tape deck stops automatically after having played 8 times both side A and B.)



## Using the Tape Counter

### Tape counter

The tape counter indicates the tape's elapsed time as the continuous number.

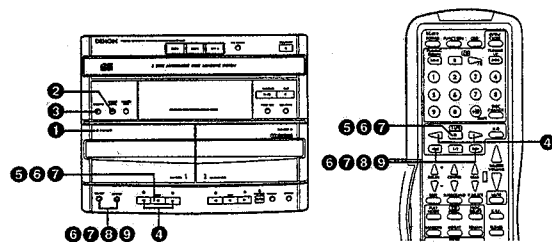
TAPE COUNT  
0123

- The counter is reset to "0000" when the COUNTER RESET button is pressed.
- If you make notes on the number on the counter and the recorded content while recording or playing tapes, these notes can be used to easily find the section you want to play or record.

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## 14 PLAYING CASSETTE TAPES

(single-sided, double-sided and continuous playback)



1	Press the <b>PUSH EJECT</b> button and load a recorded tape in the cassette compartment. Refer to Page 22.	
2	Press <b>REVERSE MODE</b> button. Refer to Page 23.	
3	Press the <b>DOLBY NR</b> button to display the Dolby mode. Refer to Page 12.	<p>The mode changes as follows each time the button is pressed:</p> <p>NR → NR → Display off</p> <p>D-850 : NR → Display off</p> <p>When playing tape recorded with Dolby NR, set the Dolby mode to the same mode (B or C) as when the tape was recorded.</p>
4	Press the <b>▶</b> or <b>◀</b> (play) button.	Playback begins in the direction of that button and the play indicator blinks.
5	To stop playback, press the <b>STOP</b> (■) button.	

## Fast-forwarding and Rewinding

6	When listening to the front side: (when ● is blinking)	Press the <b>STOP</b> (■) button. Direction of travel: To rewind (◀ / SKIP) or To forward (SKIP / ▶).
7	When listening to the back side: (when ● is blinking)	Press the <b>STOP</b> (■) button. Direction of travel: To forward (◀ / SKIP) or To rewind (SKIP / ▶).

• To fast-forward or rewind the tape, first press the **STOP** (■) button, then press the **◀ / SKIP** or **SKIP / ▶** button.

## Using the Music Search Function (automatically finding the beginning of the track)

■ Use this function to move back to the beginning of the current track or forward to the beginning of the next track.

8	When listening to the front side:	Press <b>◀ / SKIP</b> button to return to the beginning of the current track. Press <b>SKIP / ▶</b> button to return to the beginning of the next track.
9	When listening to the back side:	Press <b>◀ / SKIP</b> button to move to the beginning of the next track. Press <b>SKIP / ▶</b> button to return to the beginning of the current track.

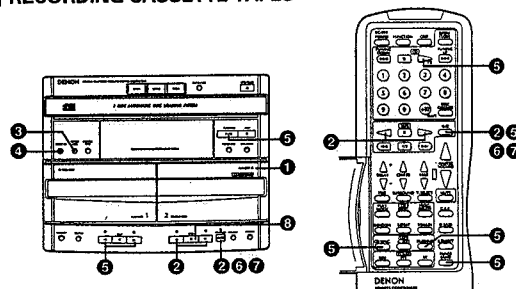
• The Music Search function will work only when there are blank sections provided at least 4 seconds between the tracks.

## NOTE:

• If lightning or other event temporarily shuts down the power supply while a cassette tape is playing, the cassette deck will stop operating. Even if you press the **▶** or **◀** (play) button after that, the tape will work but you will not hear any sound. In this case, you should first press the **STOP** (■) button. Then press the **▶** or **◀** (play) button and the deck will work normally again.

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## 15 RECORDING CASSETTE TAPES



- Before recording on a cassette tape, check that its accidental erasure protection tabs are intact. Recording is not possible if the tabs are broken off.
- The positions of the **MASTER VOLUME** and **DYNAMIC BASS** controls do not affect the recording.

1	Press the <b>PUSH EJECT</b> button and load a recorded tape in the cassette compartment. Refer to Page 22.	
2	Press the <b>Tape REC/PAUSE</b> (● / ■) button. Press <b>▶</b> or <b>◀</b> to change the recording tape side, if necessary.	
3	Press <b>REVERSE MODE</b> button. Refer to Page 23.	
4	Press the <b>DOLBY NR</b> button to display the Dolby mode. Refer to Page 12.	<p>The mode changes as follows each time the button is pressed:</p> <p>NR → NR → Display off</p> <p>D-850 : NR → Display off</p> <p>To record in Dolby NR, set to "B" or "C".</p>

5	Recording from Radio (air check) Press the <b>TUNER BAND</b> selector button. Tune in the station to be recorded. Refer to Page 19.	Recording from TAPE 1 (Dubbing) Load the source tape in TAPE 1. ④ Press the <b>DUBBING</b> button on the remote control unit. The "DUB" indicator lights up in the display. Recording from TAPE 1 will start automatically. OR ④ Press the <b>FUNCTION</b> button to select TAPE mode. Press the <b>Tape REC/PAUSE</b> (● / ■) button. Then press <b>TAPE 1</b> (▶) or <b>◀</b> (play) button. Recording from TAPE 1 will start.	Recording from CD Load a disc in the CD player. Refer to Page 26. ④ Press <b>PLAY MODE</b> button on the remote control to select <b>DISC ALL</b> or 1. Press <b>CD SYNC</b> button on the remote control unit. "CD SYNC" appears in the display and recording from the CD will start automatically. OR ④ Press the <b>FUNCTION</b> button to select CD mode. Press the <b>Tape REC/PAUSE</b> (● / ■) button. Then press <b>CD PLAY/PAUSE</b> (▶ / ■) button. Recording from CD will start.
6	Press the <b>Tape REC/PAUSE</b> (● / ■) button. Recording from the radio will start.	Press the <b>Tape REC/PAUSE</b> (● / ■) button. Recording from TAPE 1 will start.	Press the <b>Tape REC/PAUSE</b> (● / ■) button. Recording from CD will start.
7	To pause the recording press the <b>Tape REC/PAUSE</b> (● / ■) button.	To pause the recording press the <b>Tape REC/PAUSE</b> (● / ■) button.	To start the recording again, press the <b>Tape REC/PAUSE</b> (● / ■) button again.
8	To stop the recording, press the <b>TAPE 2 STOP</b> (■) button.	To stop the recording, press the <b>TAPE 2 STOP</b> (■) button.	To stop the recording, press the <b>TAPE 2 STOP</b> (■) button.

## NOTES:

- **PAUSE** function does not work when Dubbing or CD SYNC mode is used. To use **PAUSE** function, start recording with the alternative operation described as ④ above.
- The **CD SYNC** function will not work if the CD player is set to the play mode.
- Recording from TAPE 1
  - In the case of ④, regardless of DOLBY NR mode if the source tape in TAPE 1 has been recorded with DOLBY B (or C), then the tape in TAPE 2 will be duplicated with DOLBY B (or C).
  - In the case of ④, if the source tape in TAPE 1 has been recorded with DOLBY B (or C), set the mode of DOLBY NR matching to the tape. But, the tape in TAPE 2 will be duplicated with DOLBY OFF.

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## 16 PLAYING CDs

### About Compact Discs



Only discs with the mark shown left can be played on the CD player.

- For CDVs, only the audio part is played. (the video part is not played.)

#### Removing discs from their cases

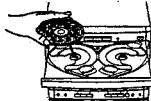
As shown on the diagram, grasp the outer edge of the disc with your fingers, insert a finger in the center hole, press gently, then lift the disc out of the case.



Disc	Remarks
CD	Only the audio part is played.
CD singles (8 cm discs)	

#### Loading discs in the disc tray

Be sure to load the disc with the labelled side facing up. (Compact discs only play on one side.) For 8 cm CDs, set the disc in the sunken section in the center of the tray.



#### NOTES:

- The disc tray opens when the OPEN/CLOSE (Δ) button is pressed once and closes when it is pressed again.
- Gently pressing the centre of the disc tray will also close it automatically. Do not push on the tray while it is revolving as this may damage it.
- The disc tray can also be closed by pressing the PLAY/PAUSE (▶/⏸) button, in which case playback automatically starts from the first track on the disc (or if tracks are programmed, from the first programmed track).

#### Handling the Disc Tray

Do not turn off the power, stop the disc tray by hand or pull on it when it is moving. Doing so may damage it. If the headphones cord or some other object accidentally get caught in the disc tray while it is closing and the disc tray stops, press the OPEN/CLOSE (Δ) button again to open the tray and remove the obstacle. Do not set objects other than discs on the disc tray. Doing so may damage it.

#### CAUTION!

- Only load or replace CDs on the two forward disc holders. Do not try to force a CD into the back disc holder as this will cause the CD to become jammed resulting in malfunction and/or damage to the system.
- Make sure that CDs are properly placed in the disc holders.

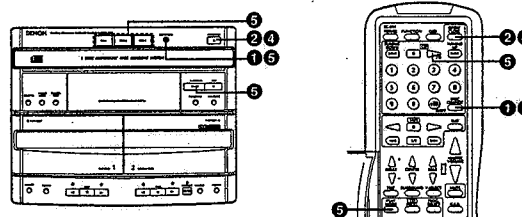


#### NOTES ON LOADING DISCS:

- Do not load more than one disc into the disc holder. It may cause damage to both the system and CD.
- Beware of your finger being trapped by the CD tray during closing.
- Do not load CDs which is cracked, distorted or repaired with the adhesive.

### Normal Playback

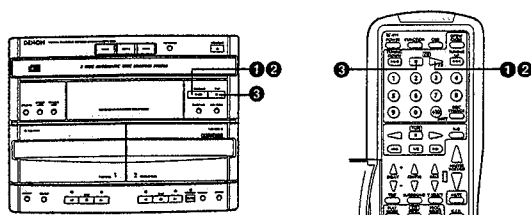
The CD player's disc tray can be loaded with 1, 2 or 3 CDs for extended CD playback.



Example: Playing a disc containing 15 tracks and with a playing time of 62 minutes, 03 seconds in the disc 1 tray, starting from the first track.

1	Press DISC CHANGE button to select desired disc number to load.		
2	Press the OPEN/CLOSE (Δ) button to open the disc tray. The tray will open and revolve to the disc position selected.		
3	Load the CD in the disc tray. When loading only 1 CD, place it on either of the front disc holders. Press DISC CHANGE button to rotate the disc tray to load another disc if necessary.		
4	Press the OPEN/CLOSE (Δ) button. The disc tray will close.		
5	Press PLAY MODE button on the remote control unit to select DISC ALL (long play mode) or 1 (single play mode). ④ Press the DISC 1, DISC 2 or DISC 3 button. CD will start playing automatically. OR ⑤ Press DISC CHANGE button to select the disc to play. Then press the PLAY/PAUSE (▶/⏸) button to start playing.		

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### Interrupting Playback Temporarily

1	Press the PLAY/PAUSE (▶/⏸) button.		The "II" mark appears on the display, and playback stops at the point where the button was pressed.
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### Resuming Playback

2	Press the PLAY/PAUSE (▶/⏸) button.		The "II" mark turns off on the display, and playback resume from the point where the PLAY/PAUSE (▶/⏸) button was pressed.
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### Stopping Playback

3	Press the STOP (■) button.		
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#### NOTE:

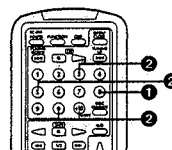
- When you try to play and no disc is loaded, if the disc is upside down, or if the data cannot be read properly due to scratches or dirt, the display reads as shown below and the disc will not play.

no disc

### Various Playback Functions

In addition to the normal playback, the unit also offers the following playback functions:

- DIRECT SEARCH: Playing a specific track (Using the remote control unit)



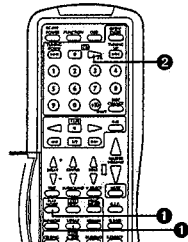
#### Example: Playing the 8th track

- Press the button corresponding to the number of the track 8. "8" appears on the track number display and playback of track number 8 begins.
- When the end of the track is reached, playback stops.

To enter the track number bigger than 10,

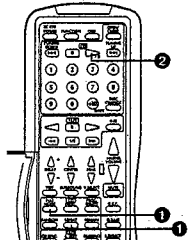
- Example:  
Track No. 15 Press [+10] and [5]  
Track No. 20 Press [+10], [+10] and [0]  
Track No. 23 Press [+10], [+10] and [3]

- 1-DISC REPEAT: Playing all the tracks of 1-Disc repeatedly (Using the remote control unit)



- Select 1-Disc play mode "II" by pressing PLAY MODE on the remote control unit. When the REPEAT button is pressed, "II" appears on the display and the all-track repeat mode is set.
- Press the ▶/⏸ (Play/Pause) button to start playback.
- To cancel the 1-Disc repeat mode, press the REPEAT button to turn the "II" indicator off.
- If the REPEAT button is pressed during programmed playback, the tracks are played repeatedly in the programmed order.

- ALL-DISC REPEAT: Playing all the discs repeatedly (Using the remote control unit)



- Select All-Disc play mode "III" by pressing PLAY MODE on the remote control unit. When the REPEAT button is pressed, "III" appears on the display and All-Disc repeat mode is set.
- Press the ▶/⏸ (Play/Pause) button to start playback.
- To cancel the All-Disc repeat mode, press the REPEAT button to turn the "III" indicator off.
- If the REPEAT button is pressed during programmed playback, the tracks are played repeatedly in the programmed order.

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#### 4. PROGRAMMED PLAYBACK : You can programme up to 20 tracks selecting from up to 3 discs and play them in the desired order.

(Using the remote control unit)

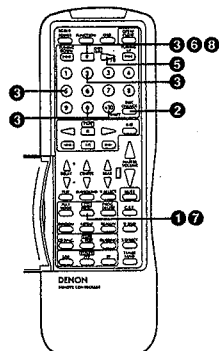
- When the REMAIN button is pressed before playback, the total playback time of programmed tracks is displayed.

Other operations possible during programmed playback:

- Such operations as quick search, pause and skip monitor are also possible during programmed playback.
- For the quick search function, press the automatic/manual search reverse button to move to the beginning of the track, then, press it again while the time display reads "0:00" to move back to the beginning of the preceding track.
- To move ahead to the beginning of the next track, press the automatic/manual forward button, regardless of the time display.

##### NOTES:

- The numbers of the programmed tracks on the music calendar turn off after the tracks have been played.
- With this CD player, up to 20 tracks with any track number between 1 and 99 can be programmed.



1	With the CD player in stop mode, press PROG. button on the remote control unit, and "PROG" will appear in the display.		
2	Repeatedly press DISC CHANGE button on the remote control to select the desired disc in the CD tray.		

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#### 5. DELETE PROGRAMING PLAYBACK : Programmed playback with undesired tracks deleted.

(This operation is only possible from the remote control unit)

Example: Programming not to play 3rd and 18th tracks, using a CD containing 18 tracks and with a playing time of 62 minutes, 03 seconds.

##### Procedure

1	Press the PROG. DELETE button.		
2	Press [3] to set the 3rd track at the first place in the program.		
3	Press [+10] and [8] to set the 18th track at the second place in the program.		
4	Press the >/II (Play) button.		

- You can programme up to 20 undesired tracks not to play from DISC 1 to 3.

3	Press the desired track number on the remote control. For example, if you want to program the track number 5, 12 and 30, press [5], [+10], [2] and [+10], [+10], [+10], [0]. NOTE: • To cancel programme mode, press [stop] on the remote control unit or STOP [ ] on the front panel.		
4	Follow the same operation step 2-3 for further programming up to 20 tracks.		
5	Press >/II on the remote control or PLAY/PAUSE [ ] on the front panel.		
6	Press [stop] on the remote control unit or STOP [ ] on the front panel once. NOTE: • Programme steps will be cleared if you press [stop] or STOP [ ] more than one time.		
7	To review the programme: Repeatedly press PROG. button on the remote control. Each time you press PROG. button, the disc number (①), the track number (②) and its programme step (③) are indicated in the display.		
8	To clear the programme: With the CD player in stop mode, repeatedly or continuously press [stop] on the remote control unit or STOP [ ] on the front panel.		

#### 6. RANDOM PLAYBACK : Playing the tracks in random order

(Using the remote control unit)

About play mode in random play

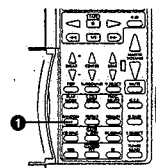
- Random play in ALL-DISC play mode: All the tracks of each disc will be played in random order, starting from the disc you selected to the last disc.

When select DISC 1 in ALL-DISC mode: DISC 1 DISC 2 DISC 3 STOP

When select DISC 2 in ALL-DISC mode: DISC 2 DISC 3 STOP

When select DISC 3 in ALL-DISC mode: DISC 3 STOP

- Random play in 1-DISC play mode: All the tracks of the disc you selected will be played in random order.



With the set in CD mode, press RANDOM button on the remote control unit. Then "RANDOM" appears in the display.  
To cancel random play, press [stop] button on the remote control unit or STOP [ ] on the front panel. "RANDOM" disappears in the display.

##### NOTE:

- When you want to halt random play without cancelling the play, press >/II on the remote control unit or PLAY/PAUSE [ ] on the front panel.

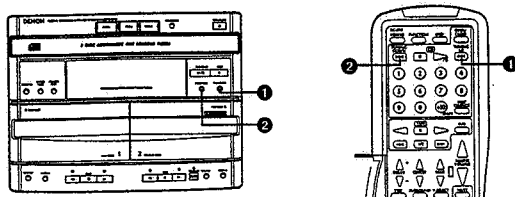
##### TIPS:

- Pressing >/II or >/II makes the random play take a step forward.
- Pressing RANDOM button renews the random play.

##### NOTES:

- The total remaining time cannot be displayed during the random playback mode.
- The random playback mode cannot be set during editing.
- If you press RANDOM button while PROGRAM mode is selected, the PROGRAM mode will be cancelled and the RANDOM mode will start.

7. QUICK SEARCH : Moving ahead to the desired track during playback  
You can skip the tracks to the desired track number during playback.



To skip the tracks forward

1	Press the <b>SKIP FORWARD</b> button, or <b>SKIP FORWARD</b> button on the remote control unit until the display shows the desired track number. Example (Current playing track is 8) Skip to Track 9 Press once. Skip to Track 14 Press 6 times.	
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To skip the tracks backward

2	Press the <b>SKIP BACKWARD</b> button, or <b>SKIP BACKWARD</b> button on the remote control unit until the display shows the desired track number. Example (Current playing track is 8) Skip to Track 7 Press twice. Skip to Track 2 Press 7 times.	
---	--	--

8. SKIP MONITOR : Finding a certain spot on the disc while listening to the sound.

To skip forward while listening to the sound

1	Press and hold down the <b>SKIP FORWARD</b> button, or <b>SKIP FORWARD</b> button on the remote control unit until you find the desired point. When you release the button, the play speed resumes to the normal speed. The track currently being monitored and the elapsed time for that track are indicated on the display.	
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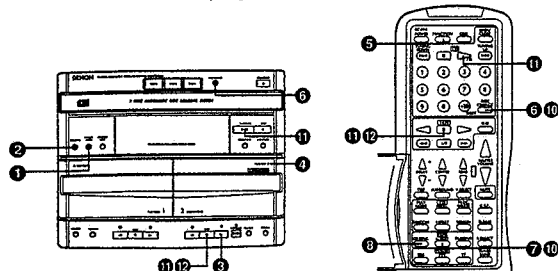
To skip backward while listening to the sound

2	Press and hold down the <b>SKIP BACKWARD</b> button, or <b>SKIP BACKWARD</b> button on the remote control unit until you find the desired point. When you release the button, the play speed resumes to the normal speed. The track currently being monitored and the elapsed time for that track are indicated on the display.	
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Edited Recording on Sides A and B of a Tape

1. AUTOMATIC EDITED RECORDING : This function automatically arranges CD tracks to be recorded matching to your tape length.



1	Press <b>REVERSE MODE</b> button to select Double-side recording/playback mode (  ).	
2	Press the <b>DOLBY NR</b> button to display the Dolby mode.	Display off
3	Press the <b>PLAY</b> button.	Lights
4	Loading a tape in TAPE 2. Side A facing toward you.	
5	Press the <b>FUNCTION</b> button on the remote control unit or the front panel to set the CD mode.	IN CD
6	Repeatedly press <b>DISCHARGE</b> button on the remote control to select the desired disc in the CD tray.	or  or
7	With the set in CD stop mode, repeatedly press <b>A.EDIT</b> button on the remote control to get the playing time of your tape in the display. For example, if you use a 60-minute tape, select C-60.	The display changes as shown below each time the A.EDIT button is pressed.  CD/Cassette Display

When using a tape other than C-45, C-60 or C-90 (for example C-54), get "C-~" in the display first and enter its playing time "set" by pressing the number buttons of the remote control.	<p>• Press (+10) button five times.</p> <p>• Press (4) button.</p> <p>C-~ → C-5 → C-54</p>
Then the set will show you the track numbers to be recorded and a remainder time of the tape (①) as "A FILE" (for the Side A of the tape), then "b FILE" (for the Side B of the tape). Lastly, the unit will indicate the last track number (②) and the total number of tracks to be recorded (③).	<p>Example: For a 60-minute tape</p> <p>C-60</p> <p>A FILE</p> <p>Side A display-Tracks 1 to 9 will be recorded 2 minutes 40 seconds remaining on side A</p> <p>A 2:40</p> <p>b FILE</p> <p>1 minute, 20 seconds remaining on side B</p> <p>b 1:20</p> <p>16 P-16</p>
Press <b>CD SYNC.</b> button on the remote control. Then the tape deck will start recording after automatically rewinding the tape to its beginning and/or skipping its leader tape.	<p></p> <p>1 0:01</p>
NOTE: • The tape deck will erase the tape remainder of Side A before starting to record "b FILE" onto the Side B of the tape.	

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## 2. CONTINUOUS EDITED RECORDING : You can record from more than one disc onto a tape.

9	When the last track of the disc has been recorded in the Auto Edit recording, both the CD player and tape deck stop and the Continuous Edit Indicator "CONT" (G) appears in the display. Replace the disc with another one. Then the unit arranges tracks to be recorded onto the remainder of the tape.	
10	Repeatedly press DISC CHANGE on the remote control, or press DISC selection buttons of the desired number on the front panel. Then press A.EDIT button on the remote control to arrange tracks to be recorded onto the remainder of the tape. NOTE: • You can replace discs with new ones by pressing the OPEN/CLOSE (A) button. In this case, the unit automatically starts arranging tracks when the CD tray is closed.	
11	Press D/I on the remote control or PLAY/PAUSE (P/II) on the front panel to start Continuous Edit recording. NOTE: • Pressing CD SYNC. button cannot start Continuous Edit recording.	
	When the tape remainder is not enough for recording any track of the disc, "no FILE" appears in the display. In this case, try a different disc, or press the cassette deck stop button (E) on the remote control or STOP (E) on the front panel to cancel the Continuous Edit recording.	

12	Press the cassette deck stop button (E) on the remote control or TAPE 2 stop button (E) on the front panel. NOTE: • When you press the CD player stop button (E) on the remote control or STOP (E) on the front panel, the Auto Edit recording is cancelled, but the tape deck becomes recording stand-by status after having inserted 4-second unrecorded interval. Press the cassette deck stop button (E) on the remote control or TAPE 2 stop button (E) on the front panel if you want to cancel the recording stand-by status.	
----	--	--

### NOTES:

- The Auto Edit recording function records up to 20 tracks, selecting from the first track to the 23rd track within a disc. If a disc has more than 23 tracks, the rest of the tracks are ignored.
- In the edited recording mode, it is programmed so that the remaining time of the tape becomes minimum and the last programmed track may be out of line on both side. If you want to make serial track recording in this case, use the CD SYNC. button after stopping the edited recording mode. Refer to Page 25.
- Load the cassette tape onto which you want to record in the cassette deck with side A facing toward you before starting the editing procedure. The tape is automatically wound to the beginning before recording starts.
- The editing mode is cancelled when the CD player's STOP (E) button is pressed.
- Note that even if the tape is slightly longer than the disc's total playing time, it may not be possible to record all the tracks on sides A and B because of the combination of tracks to be recorded on the different sides of tape.
- When recording on an already recorded tape, if the tape is longer than the new recording, the previous recording will remain at the end of side B, so erase the tape before starting.
- Blank sections of 4 seconds are automatically created between all the selections to make it easier to search for selections on the tapes recorded on this system. Since this differs from the actual time between tracks on the CD, the displayed time and the actual remaining time on the tape differ slightly.

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## 17 USING THE TIMER

The time and timer play function are incorporated in the TUNER, the CD and the TAPE. Timer record function is only incorporated in the TUNER.

### Timer Operation

#### ■ Types of timer operations

- TIMER** : Use this to turn the power on and off at the same times every day.  
**SLEEP TIMER** : Use this to set the power to turn off after 15 minutes, 30 minutes, 45 minutes, 1 hour, 1 hour 15 minutes and 1 hour 30 minutes. (operated from the front panel).

#### ■ Notes on timer settings

- Be sure to set the current time beforehand.
- To listen to or record a radio program ("air check") using the timer, be sure to preset the station beforehand. (Refer to "Presetting AM and FM Stations" on Page 13.)
- The timer-play/recording can activate only when the set is in power standby.
- When you enter the same settings of time both for turning on and off, the timer function is also cancelled.

### Power Failures

Should there be a power failure or should the power cord be unplugged, the time display will flash at "--:--". If this happens, reset the current time.  
 Also check the timer and tuner presetting and reset them if they have been cleared.

### Checking the Settings

To check the timer settings, press the C/T/S button twice. Then on and off time will be shown on the display.

### Changing the Settings

Repeat the timer setting operation to erase the previous settings and set the new settings.

### Note on Settings the Timer

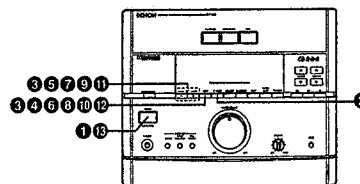
If the time set with the timer is reached while the system power is on, the operation does not switch to the operation set by the timer.

### Turning the Timer off

Press the T.MODE button to "OFF" mode.

### Setting the Timer


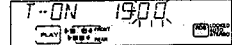

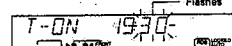

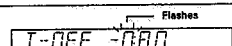

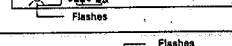

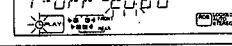

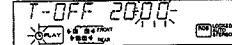

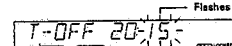

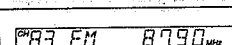
The power can be set to turn on and off every day at the same time in any of three modes: TUNER, CD, TAPE and air check (recording from the tuner). (Preset the AM or FM station beforehand.)



Example: Setting the tuner to turn on at 19:30 (7:30 pm), off at 20:15 (8:15 pm) (with FM 87.90 MHz preset at channel "A3")

1	Press the POWER button to turn on the system's power.		
2	Use the T.MODE button to set the "PLAY" mode.		
3	Press the C/T/S button twice to set the timer setting mode. Press the SET - or + button to set the "TUNER" mode.		
4	Press the C/T/S buttons, then "T-ON" appears in the display.		
5	Use the SET - or + button to set the hours for the timer on time.		

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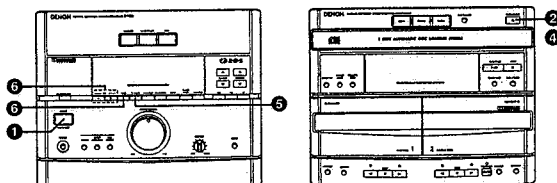
6	Press the C/T/S button.			Flashes
7	Use the SET - or + button to set the minutes for the timer on time.			Flashes
8	Press the C/T/S button, then the "T-OFF" appears in the display. "0" starts blinking.			Flashes
9	Use the SET - or + button to set the hours for the timer off time.			Flashes
10	Press the C/T/S button.			Flashes
11	Use the SET - or + button to set the minutes for the timer off time.			Flashes
12	Press the C/T/S button.			The display returns to as it was before the timer setting mode was set.
13	Press the POWER button to turn off the system's power.			

If the 0 mark is displayed, the timer will operate at the same times every day. To turn the timer off, press the T.MODE button to "OFF" mode.



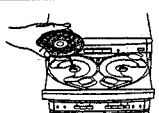





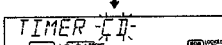
NOTE:

- The standby mark "0" will not light if the current time and the timer time (on time and off time) are not set. If this is the case, set the current time and the timer time.

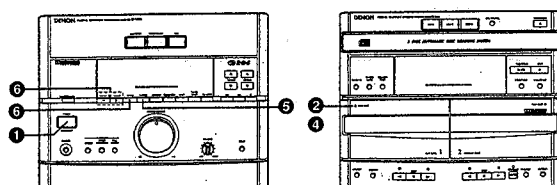
#### Various Timer Operations





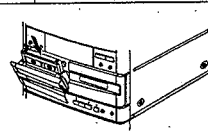




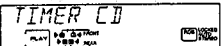
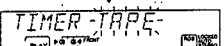
#### Example 1: Playing a compact disc with the timer

1	Press the POWER button to turn on the system's power.		
2	Press the CD player's OPEN/ CLOSE (Δ) button to open the disc tray.		
3	Load the disc in the disc tray. Refer to Page 28.		
4	Press the CD player's OPEN/ CLOSE (Δ) button to close the disc tray.		
5	Use the T.MODE button to set the "PLAY" mode.		
6	Press the C/T/S button twice to set the timer setting mode. Press the SET - or + button to set the "CD" mode.	 	 
7	Now follow steps 4 to 13 under "Setting the Timer" on Page 33, 34.		

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#### Example 2: Playing a cassette tape with the timer



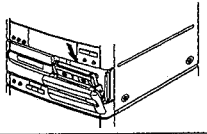



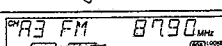


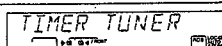
1	Press the POWER button to turn on the system's power.		
2	Press the cassette deck's Δ PUSH EJECT button to open the cassette door.		
3	Load the cassette tape.		
4	Press the cassette deck's Δ PUSH EJECT button to close the cassette door.		
5	Use the T.MODE button to set the "PLAY" mode.		
6	Press the C/T/S button twice to set the timer setting mode. Press the SET - or + button to set the "TAPE" mode.	 	 
7	Now follow steps 4 to 13 under "Setting the Timer" on Page 33, 34.		

- Check that the direction of tape travel, reverse mode and Dolby NR mode are set as desired.
- Set the volume control to the desired level.
- The tape deck always starts in the Forward Play under timer-play.

#### For TAPE 2-play:

- Remove the cassette tape from TAPE 1.

#### Example 3: Unattended recording of radio programs ("air check")

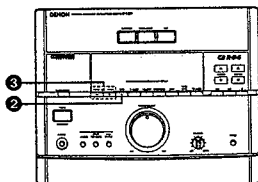
1	Press the POWER button to turn on the system's power.		
2	Press the TAPE 2 cassette deck's PUSH EJECT Δ button to open the cassette door.		
3	Load the cassette tape.		
4	Press the TAPE 2 cassette deck's PUSH EJECT Δ button to close the cassette door.		
5	Press the FUNCTION button to select TUNER.		
6	Tune to the desired station to be recorded.		
7	Use the T.MODE button to set the "REC" mode.		
8	Press the C/T/S button twice.		
9	Now follow steps 4 to 13 under "Setting the Timer" on Page 33, 34.		

- Check that the direction of tape travel and reverse mode are set as desired.
- Recording always starts in the Forward direction under timer-recording.
- Recording is not possible on the leader tape at the beginning of the cassette tape, so to avoid missing any of the program, we recommend setting the timer to approximately 1 minute before the program is scheduled to start.

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### Setting the Sleep Timer

Use this function to turn the system's power off automatically. The turn off time can be set for 15 minutes, 30 minutes, 45 minutes, 1 hour, 1 hour 15 minutes and 1 hour 30 minutes from the present time.



Example: Setting the power to turn off in 45 minutes (operate from the front panel)

1	Tuner currently set to FM 87.90 MHz.	
2	Press the C/T/S button three times. Then the sleep timer indicator "SLEEP" blinks in the display.	
3	Use the SET - or + button to set the sleep timer to "0:45".	
4	The previous display reappears after 5 seconds. The "SLEEP" indicator remains lit, indicating that the sleep timer is functioning.	

- To cancel the sleep timer, reset the sleep timer to "0:00" by following the operation steps 2-3. Then the indicator "SLEEP" will disappear in 5 seconds.

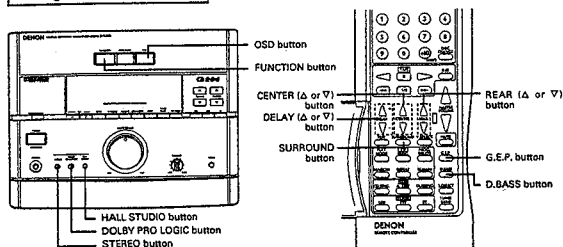
#### NOTES:

- While the timer is on, sleep timer is not available.
- If the timer play or recording is set when the sleep timer is turned off, but it has reached the timer time, the timer operation does not start.

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### 18 OSD FUNCTION (For D-1250 only)

#### Using the OSD Function



1	Connect MONITOR OUT terminal on the rear panel to VIDEO IN terminal on your TV (monitor). Refer to Page 8.	
2	Press the OSD button. You can select the System Settings menu on your TV (monitor) screen.	

#### System Settings Menu

- This mark on this page indicates operations which can also be performed on the remote control unit by pressing the SURROUND button.

3	Select the desired mode on the screen. "D" shows the settings selected.	
		<ul style="list-style-type: none"> <li>Press FUNCTION button.</li> <li>Press STEREO button. (*)</li> <li>Press DOLBY PROLOGIC button.</li> <li>Press HALL STUDIO button. (*)</li> <li>Press D.BASS button on the remote control unit.</li> <li>Press G.E.P. button on the remote control unit.</li> <li>Press VIDEO SELECT button.</li> </ul>

### Surround Mode and Tone Setting

4	Press the OSD button to show Surround Mode setting on the screen. Change the setting value for Delay time, Center speaker volume level and Rear (Surround) speaker volume level.	<p>Example:</p> <p>Surround Mode: DOLBY PRO LOGIC - NORMAL</p> <p>Delay Time: 20 ms</p> <p>Center speaker volume level: -10dB</p> <p>Rear (Surround) speaker volume level: -10dB</p>
		<p>To change settings:</p> <ul style="list-style-type: none"> <li>Press STEREO, DOLBY PRO LOGIC or HALL STUDIO button. (*)</li> <li>Press DELAY (Δ or ∇) button on the remote control unit to set the delay time. (15 ms to 30 ms by 5 ms)</li> <li>Press CENTER (Δ or ∇) button on the remote control unit to set the center speaker volume level. (-20dB min to 0dB max)</li> <li>Press REAR (Δ or ∇) button on the remote control unit to set the rear (surround) speaker volume level. (-20dB min to 0dB max)</li> </ul>

### D.Bass and G.E.P. Setting

5	Press the OSD button to show TONE SETTINGS on the screen.	<p>Example:</p> <p>D.Bass: ON</p> <p>G.E.P.: Pops</p>
		<p>To change the settings:</p> <ul style="list-style-type: none"> <li>Press D.BASS button on the remote control unit.</li> <li>Press G.E.P. button on the remote control unit.</li> </ul>


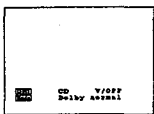

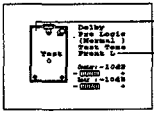
### Tuner Preset Stations

6	Press the OSD button to show TUNER PRESET STATIONS on the screen. Stations preset to CH A1 to A8 will be displayed on the screen.	
7	To show the stations preset to CH B1 to B8, CH C1 to C8 and CH D1 to D8, press the OSD button repeatedly.	
	To show the System Settings menu, press the OSD button repeatedly.	





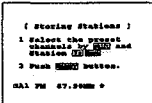

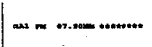


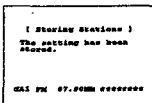
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### TEST Mode

To test the Center and Rear (Surround) speakers volume level, you can also use OSD function.




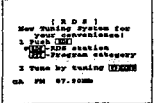


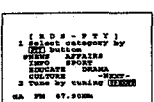

1	Press the DOLBY PRO LOGIC button to select the suitable mode.		
2	Press the TEST button on the remote control unit to confirm the volume level of the Center and Rear (Surround) speakers.  Test mode indicator will start blinking on the screen and test tone will be output to each speaker.  If necessary, adjust the Center and Rear (Surround) speakers volume level again. To exit Test mode, press TEST button on the remote control unit again.		

### Presetting AM and FM Stations



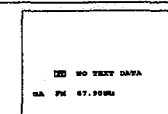

1	Press the FUNCTION button to select TUNER.		
2	Tune the station by pressing the TUNING (A) or (V) button.		
3	Press the MEMORY button.		
4	Select the stations by pressing the STATION (A) or (V) button, or SHIFT and Number buttons on the remote control unit.		
5	Enter the station name by pressing the CHARACTER button and TUNING (A) or (V) buttons.		
6	Press the MEMORY button to store.		

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### Tuning RDS Stations

1	Press the FUNCTION button to select TUNER.		
2	Press the TUNER BAND button to select FM mode.		
3	Press the RDS button.		
4	To select RDS station search, press RDS button again.  To select PTY search, press RDS button, then press PTY button to select the program type.  Each time you press PTY button, "PT" will shift to the next.	 	
5	Press the TUNING (A) or (V) button to start searching the station.		

### Showing Radio Text

1	Press the FUNCTION button to select TUNER.		
2	Select FM station with RDS service.		
3	Press the RT button to show Radio Text on your TV (monitor) screen.  If there is no text broadcasted, "NO TEXT DATA" will be displayed.		
4	To stop showing Radio Text, press RT button again.  "RT OFF" will be displayed approximately 5 seconds.		

NOTE: If the RT data is long and it takes a several seconds to receive a frame of the data, "RT" may be displayed on your TV screen.

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## 19 OTHER INFORMATION

### Cleaning the Heads

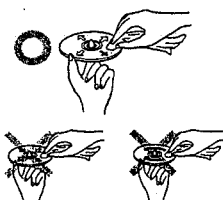
- If the cassette deck's heads are dirty, tapes cannot be played or recorded with good sound quality.
- To take full advantage of all the performance this cassette deck has to offer and ensure good quality sound, clean the heads periodically after approximately 10 hours of use, using a commercially available cleaning cassette.

**NOTE:**  
Some commercially available cleaning cassettes are highly abrasive and may damage the heads. Avoid using such cleaning cassettes.

### Demagnetizing the Heads

- The heads become magnetized after they have been used for an extended period of time or if they are exposed to a magnetic object.
- If the heads are magnetized, use a commercially available cassette-type head demagnetizer to demagnetize them.

### Cleaning Discs



Dust, fingerprints or spit on the disc will result in noise or skipping. If the disc is dirty or if the CD player does not operate properly, use the following procedure to clean the disc:

- Hold the disc with the signal surface (the side opposite the labelled side) facing up, as shown in the diagram.
- Wipe the disc gently from the center towards the edge (in the direction of the arrow) with a soft cloth.

Do not clean discs with the following:

- Benzene, alcohol or other solvents
- Cleaner including an abrasive
- Sprays or cleaners designed for records
- Anti-static

#### NOTES:


- Do not wipe discs in the direction opposite the arrow or in a circular motion as with regular records.
- The disc's signal surface is easily damaged, so do not wipe it with a hard cloth or rub it strongly.

## 20 SPECIFICATIONS

- **Tuner**  
Reception frequency band: FM: 87.50 MHz – 108.00 MHz  
AM: 522 kHz – 1611 kHz  
Reception sensitivity: FM: 1.5 µV/75 Ω/ohms  
AM: 850 µV/m  
FM stereo separation: 35 dB (1 kHz)  
Timer: Quartz lock daily timer (Timer-Sleep/Play/Rec)
- **Amplifier**  
Rated output power (Stereo): D-1250: 50 W/channel (8 ohms, 65 Hz-15 kHz, THD 1.0%)  
D-850: 35 W/channel (8 ohms, 65 Hz-15 kHz, THD 1.0%)  
Rated output power (Dolby Pro Logic): Front L/R: D-1250: 50 W x 2  
D-850: 35 W x 2  
Centre: D-1250: 50 W  
D-850: 35 W  
Rear: D-1250: 15 W x 2  
D-850: 15 W x 2  
Frequency response: 20 Hz-40 kHz (20 Hz: -2 dB, 40 kHz: -3 dB)  
Required Speaker Impedance: Front L/R: 6 – 16 ohms  
Center/Surround: 6 – 16 ohms
- **CD player**  
Wow & flutter: Unmeasurable  
Sampling frequency: 44.1 kHz  
Optical source: Semiconductor  
S/N ratio: 90 dB
- **Cassette deck**  
Type: 4-track 2-channel stereo auto reverse cassette deck  
Heads: TAPE 1: Playback  
TAPE 2: Recording/Playback  
Tape speed: 4.75 cm/s  
Included circuits: D-1250: Dolby B and C NR  
D-850: Dolby B NR  
Usable tapes: Normal, chrome and metal
- **General**  
Power supply: AC 230V, 50 Hz  
Power consumption: D-1250: 170 W  
D-850: 140 W  
Maximum external dimensions: UDRA-1250/850: 270 (W) x 215 (H) x 418 (D) mm  
UWCM-1250/850: 270 (W) x 215 (H) x 341 (D) mm  
Weight: UDRA-1250: 8.3 kg  
UWCM-1250: 5.0 kg  
UDRA-850: 7.3 kg  
UWCM-850: 5.0 kg

\* Maximum dimensions include controls, jacks and covers.  
(W) = width, (H) = height, (D) = depth

• For improvement purposes, specifications and functions are subject to change without advanced notice.

■ Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
■ "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

## 21 TROUBLESHOOTING

When the following once more before assuming there is a problem with the system.

1. Are connections proper?
  2. Is the system being operated as explained in the operating instructions?
- If the system does not seem to be operating properly, check as shown on the table below. If none of these checks apply to the problem, the system may be malfunctioning. Disconnect the power cord immediately and contact your store of purchase.

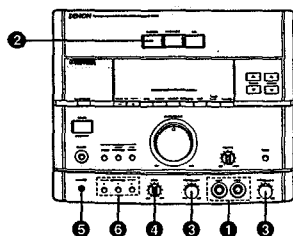
	Symptom	Cause	Countermeasure	Page
General	Power does not turn on when power switch is pressed.	• Power cord is not plugged into a power outlet.	• Plug the power cord securely into an outlet.	7
	No sound is produced from the speakers.	• MASTER VOLUME control is turned down. • Headphones are connected. • Speaker cords are not securely connected.	• Set the control to an appropriate position. • Disconnect the headphones. • Connect securely.	5, 11 7, 8
	No treble sound is produced, or the position of the instruments is unclear.	• Speaker polarities (⊕ and ⊖) are inverted.	• Connect the speaker cords properly.	7, 8
	A source other than the desired one is heard.	• Function is not properly set.	• Set the desired function using the FUNCTION button.	5, 11
Cassette deck	Recording does not start when REC/PAUSE button is pressed.	• No cassette tape is loaded. • Accidental erasure protection tabs are broken off.	• Load a cassette tape. • Cover the tab holes with cellophane tape.	22 22
	Sound is broken or no sound is produced during recording and playback.	• Heads are dirty. • Cassette tape is defective.	• Clean the heads. • Replace the cassette tape.	40 -
	Humming sound is heard while playing cassette tapes.	• Noise from a TV. (Noise may be produced by some types of TVs.)	• Move the TV away from the system. • Turn the TV off.	6 -
	Wow (shaky sound) is heavy during recording or playback.	• Capstan or pinch rollers are dirty.	• Clean them.	40
Tuner	Hissing sound is heard in FM programs.	• Antenna direction is poor. • Signals from the broadcast station are weak.	• Change the direction of the antenna. • Install an outdoor antenna.	9 9
	Hissing sound is heard in AM programs.	• Noise from a TV or interference from a broadcast station.	• Turn off the TV off. • Change the direction of the loop antenna.	- -
	Humming sound is heard in AM programs.	• Signals on the power cord are being modulated by the power source frequency.	• Insert the power cord in the opposite direction.	-
CD player	Disc is not played.	• Disc is loaded upside-down. • Disc is dirty. • Disc is not of the specified type.	• Reload the disc. • Clean the disc. • Replace with a disc of the specified type.	28 40 -
	Nothing happens when operating buttons are pressed. Disc stops in the middle of a track and will not play properly.	• Disc is loaded upside-down. • Foreign object on disc tray. • Disc is dirty. • Disc is scratched.	• Reload the disc. • Remove the disc and the foreign object. • Clean the disc. • Replace with an unscratched disc.	28 26 40 -
	Sound is broken.	• Dirt, fingerprints, spittle, etc. on disc. • Disc is scratched. • Player is in unstable place and vibrates strongly.	• Clean the disc. • Replace with an unscratched disc. • Place the player in a stable place with no vibrations.	40 - -
	Humming sound is heard when disc is played.	• Signals on the power cord are being modulated by the power source frequency.	• Insert the power cord in the opposite direction.	-

\* The set may not operate properly due to such external influences as lightning or static electricity. If this happens, either turn off the power with the POWER button or unplug the power cord, wait approximately 5 seconds, then plug the power cord back in.

	Symptom	Cause	Countermeasure	Page
CD player	"Err" is displayed.	• CD changer does not operate properly.	• Press OPEN/CLOSE button to open the CD tray. Remove all the discs and press OPEN/CLOSE button to close the tray. If the tray does not open when you press OPEN/CLOSE button, contact your store of purchase.	-

## Asia Model Only

## 12 KARAOKE FUNCTION



## Mixing Microphone

Two microphones (not supplied) can be connected to this unit, allowing you to sing along with music sources. Use a microphone with a standard plug (ø8.3 mm).

Before connecting a microphone, set the MIC VOLUME-1 or MIC VOLUME-2 control to MIN.

1	Connect your microphone to the MIC-1 or MIC-2 jack.	
2	Press the FUNCTION button to select the source to mix and play the source.	
3	Adjust the microphone volume with the MIC VOLUME-1 or MIC VOLUME-2 control respectively.	
4	Adjust the echo with the ECHO control.	

To record microphone sound mixed with source sound, refer to "RECORDING CASSETTE TAPES" on page 25 for recording operation.

## NOTE:

- Howling occurs when the microphone is brought too near to the speaker. Move the microphone away from the speaker or turn down the MASTER VOLUME, MIC VOL-1 or MIC VOL-2 control if howling occurs.

## KARAOKE Function

The KARAOKE function reduces the sound level of middle and high range sounds. Since a singer's voice falls within the effected range, the KARAOKE function allows you to turn ordinary sound sources into Karaoke sources. Should any instrumental parts fall within the KARAOKE function's range, their sound levels will be similarly reduced. For some sources such as vocal with echo effect, chorus, live music, etc., KARAOKE function may not work properly.

5	Press the KARAOKE button to select the function.	
---	--	--

If you use the music software, (dual-sound recorded CD or TAPE) whose vocal position is not recorded in the centre, follow the procedure below:

- Turn KARAOKE mode to OFF. Press KARAOKE button if KARAOKE is turned on.
- Turn the BALANCE control left until the vocal sound is removed. If the vocal sound is not removed, turn the BALANCE control right.

## KEY CONTROL Function

The key of the playback can be adjust in four steps upward and four steps downward. The interval of each step is a half tone.

6	To adjust higher key, press the # button, "+" appears on the display.	
	To restore the original key, press the 0 button, "0" appears on the display.	
	To adjust lower key, press the > button, "-" appears on the display.	

## NOTES:

- If you access one of the KARAOKE Function while DOLBY PRO LOGIC mode is selected, the mode will be switched into STEREO mode automatically.
- If the SURROUND button on the remote control is pressed while the microphone is inserted, the mode will be changed as follows:

STEREO → HALL → STUDIO

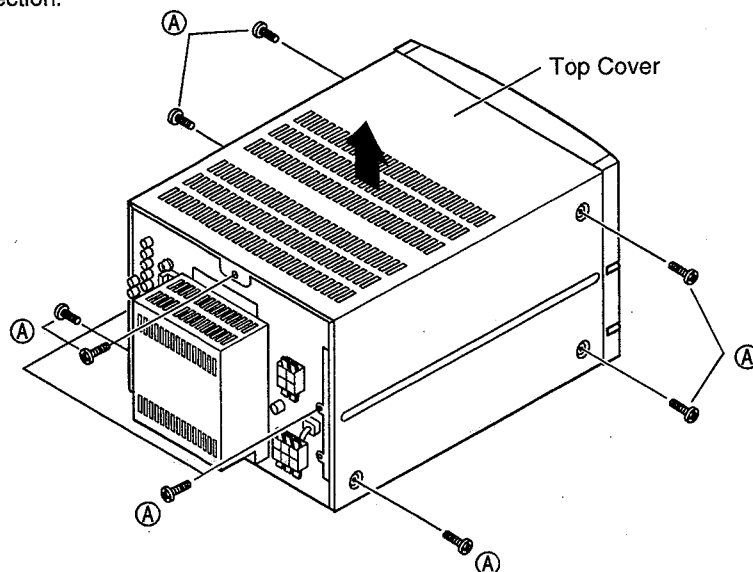
- If you insert the microphone when the DOLBY PRO LOGIC mode is selected, OSD display on your TV (monitor) will not be changed. (For D-1250 only)

## DISASSEMBLY

### TUNER-AMPLIFIER SECTION

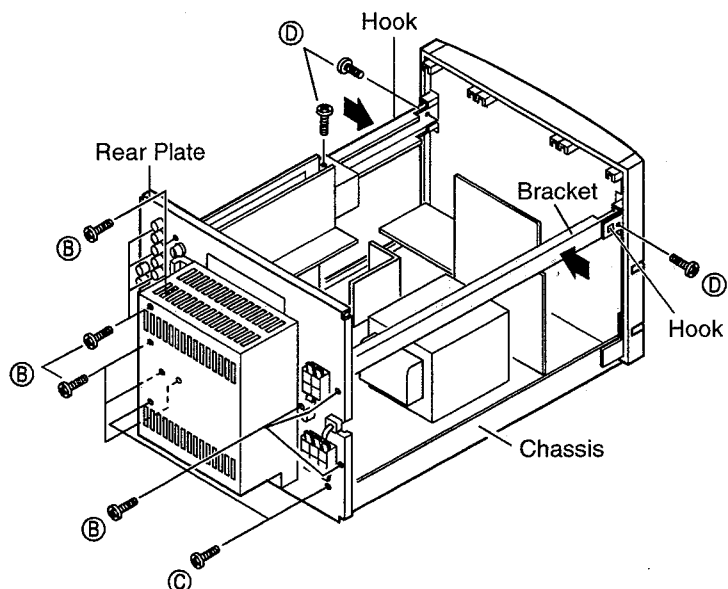
#### 1. Top Cover

Remove 9 screws (A) from rear side and both sides, then detach the Top Cover as shown in the arrow direction.



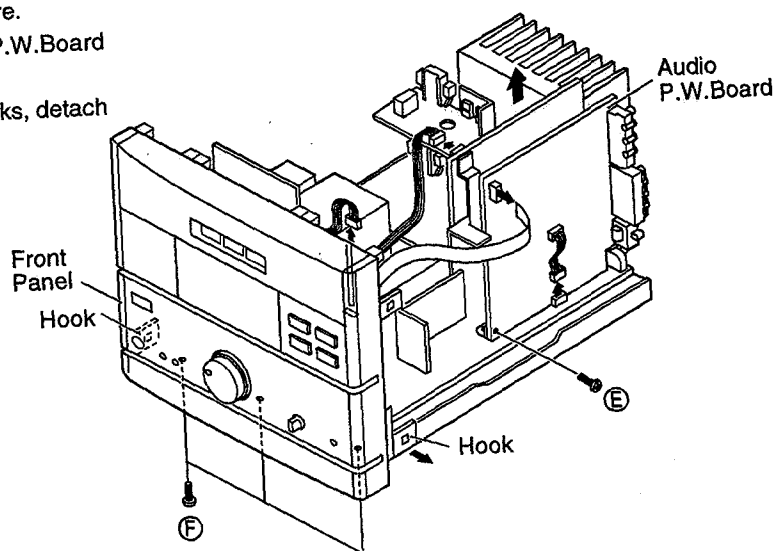
#### 2. Rear Plate

- 1) Remove 12 screws (B) fixing the Rear Plate.
- 2) Remove 2 screws (C) mounting on the chassis.
- 3) Remove 3 screws (D) mounting on the Bracket.
- 4) Undo 2 Hooks and detach the Rear Plate.



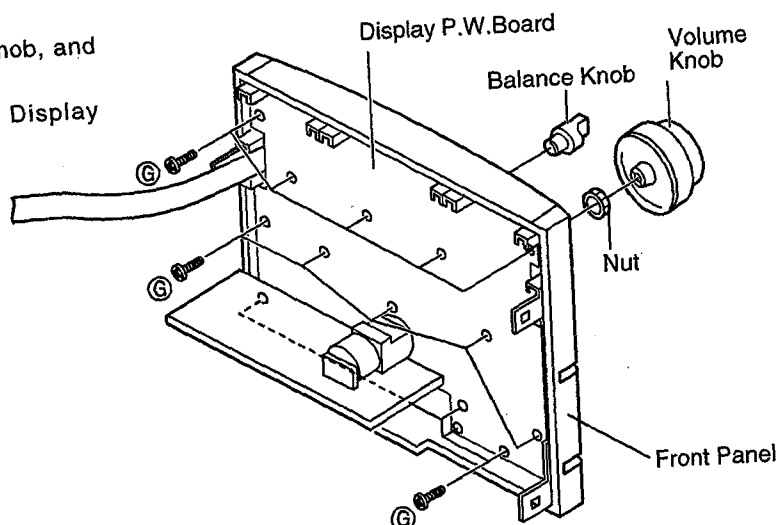
### 3. Front Panel and Audio P.W.Board

- 1) Disconnect the connectors as shown in figure.
- 2) Remove a screw (E) and detach the Audio P.W.Board as shown in the arrow direction.
- 3) Remove 3 screws (F). While undoing 2 Hooks, detach the Front Panel.



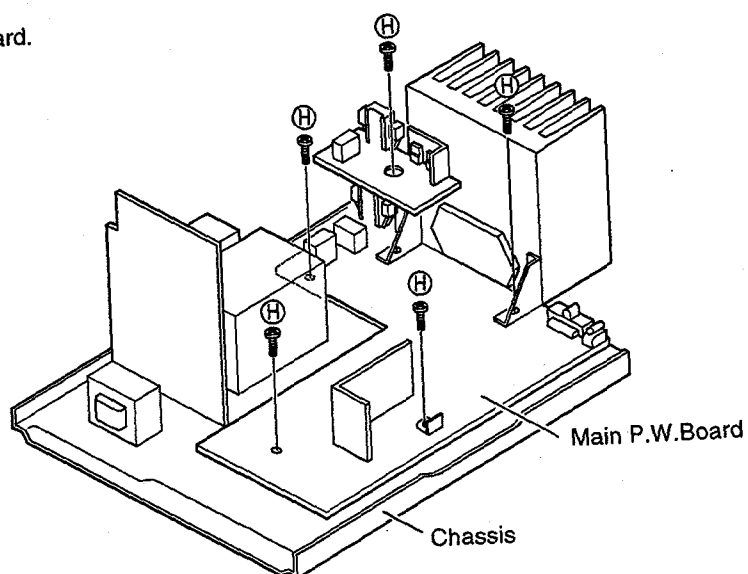
### 4. Display P.W.Board

- 1) Pull out the Balance Knob and Volume Knob, and remove a Nut.
- 2) Remove 14 screws (G) and detach the Display P.W.Board.



### 5. Main P.W.Board

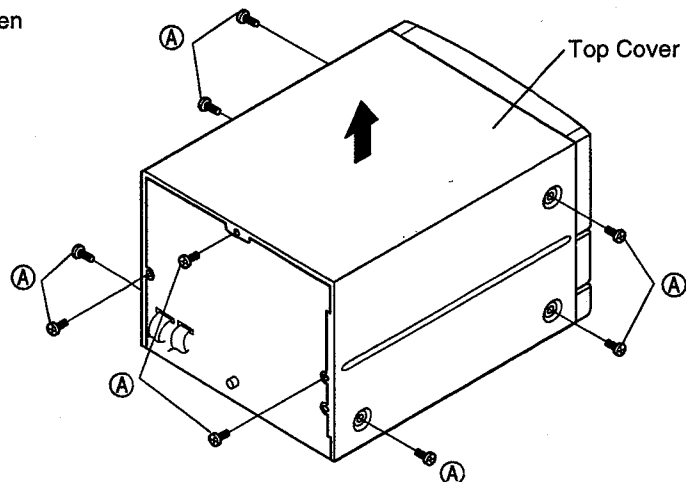
- Remove 5 screws (H) and detach the Main P.W.Board.



## CD PLAYER-CASSETTE DECK SECTION

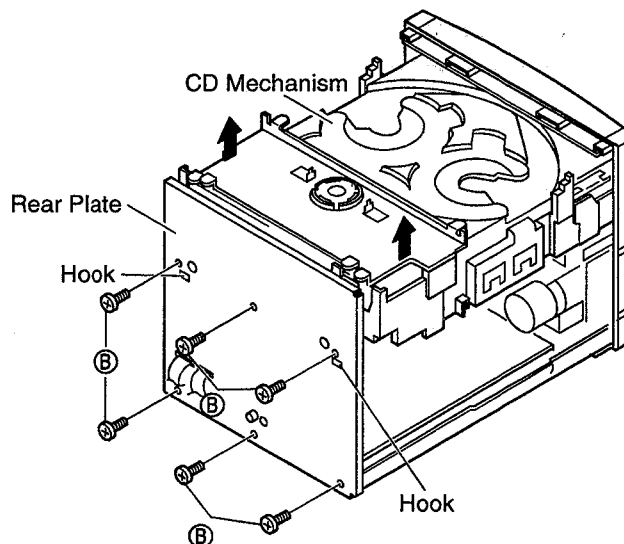
### 1. Top Cover

Remove 9 screws (A) from rear side and both sides, then detach the Top Cover as shown in the arrow direction.



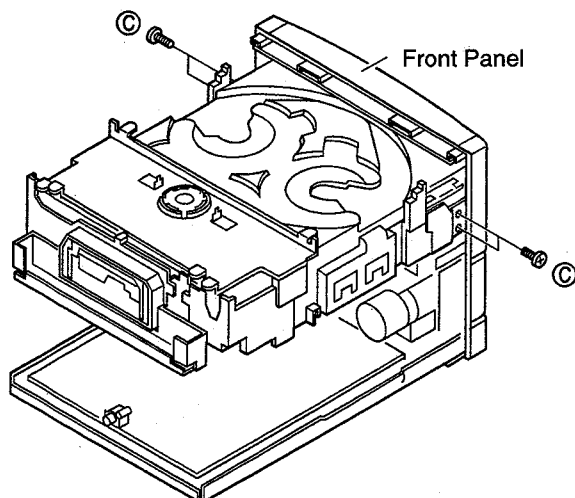
### 2. Rear Plate

- 1) Remove 6 screws (B) fixing the Rear Plate.
- 2) Lift the CD Mechanism as shown in the arrow direction and undo 2 Hooks, then detach the Rear Plate.



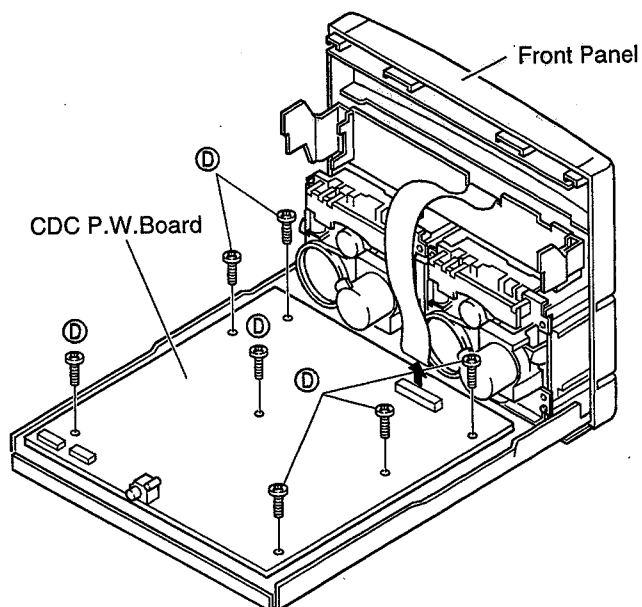
### 3. CD Mechanism

Remove 4 screws (C) and detach the CD Mechanism.



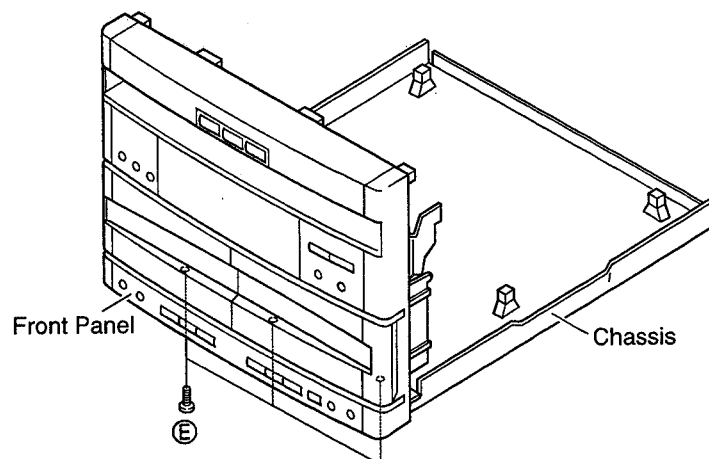
#### 4. CDC P.W.Board

- 1) Disconnect the connector as shown in figure.
- 2) Remove 7 screws ① and detach the Main P.W.Board.



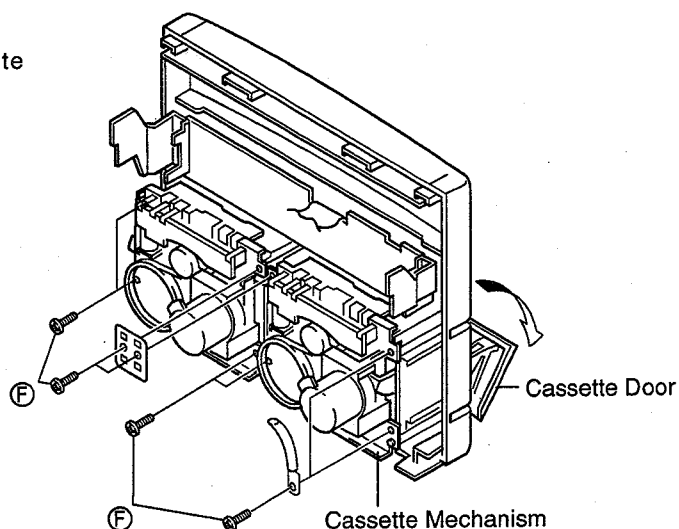
#### 5. Front Panel

- Remove 3 screws ② and detach the Front Panel.



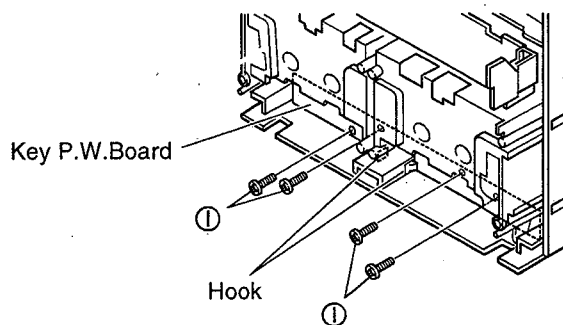
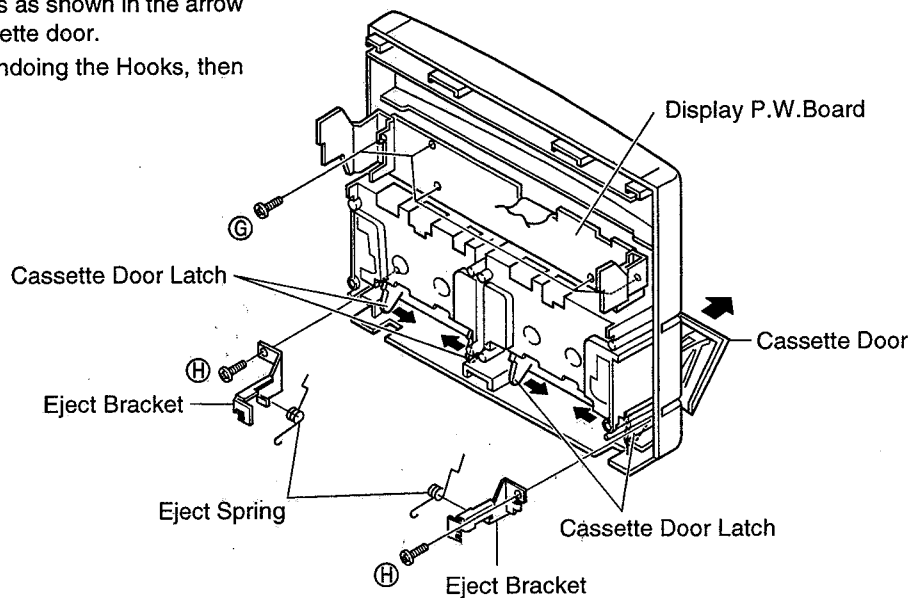
#### 6. Cassette Mechanism

- 1) Open the Cassette doors as shown in figure.
- 2) Remove 8 screws ③ and detach the Cassette Mechanism.



## 7. Display P.W.Board and Key P.W.Board

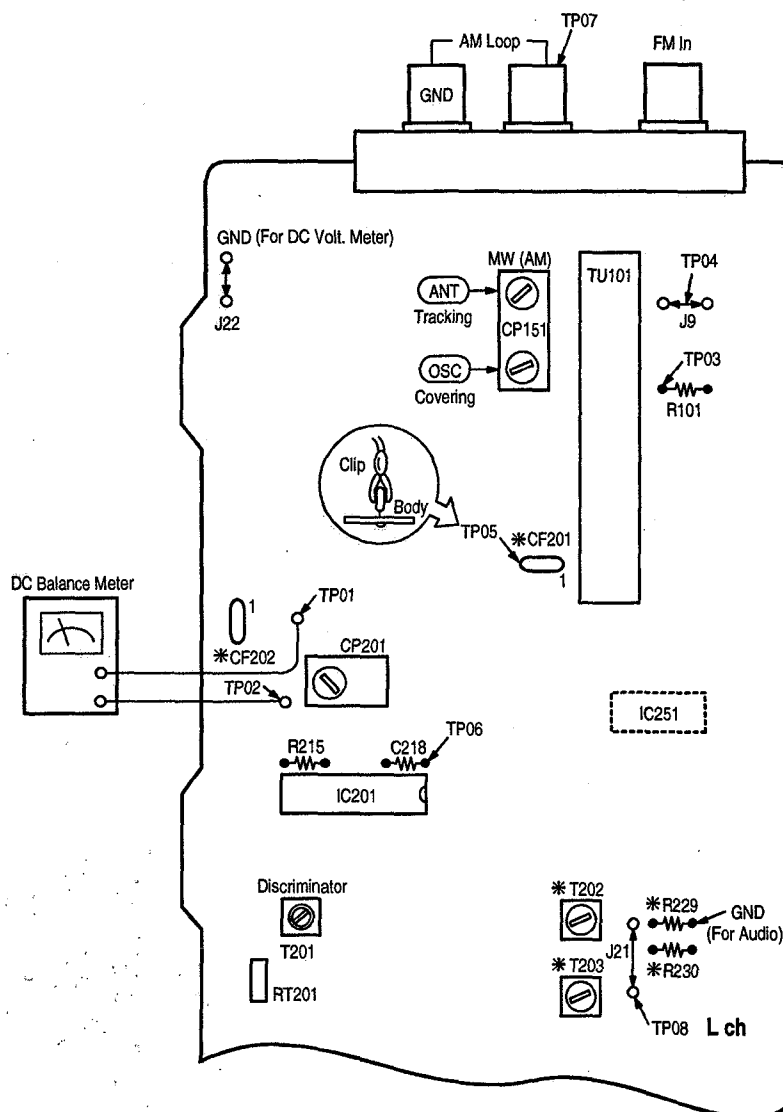
- 1) Remove 5 screws ⑥ and detach the Display P.W.Board.
- 2) Remove 2 screws ⑧, the Eject Bracket and Eject Spring.
- 3) Move the Cassette Door Latches as shown in the arrow direction, and detach the Cassette door.
- 4) Remove 4 screws ①, while undoing the Hooks, then detach the Key P.W.Board.



## ADJUSTMENT

### TUNER SECTION

#### 1. Adjustment Points



#### 2. FM Section

Item No.	Adjustment Items	Input Terminal	Output Terminal	Measuring Instrument	Frequency
1	IF Waveform	CF201 (TP05)	Tuner Out (TP08)	Genescope	All band Note 1.

Item No.	Adjustment Items	Input Terminal	Output Terminal	Frequency	Adjusting Part	Reading
2	Discriminator	FM Ant. 60 dB $\mu$ 1 kHz mod. 22.5 kHz Dev.	TP01 TP02	98 MHz	T201	0 $\pm$ 20mV
3	Sensitivity of Locked Ind.	FM Ant. 21 dB $\mu$ 1 kHz mod. 22.5 kHz Dev.	TP08		RT201	Locked Ind. Just ON

#### AM Section

Item No.	Adjustment Items	Input Terminal	Output Terminal	Frequency	Adjusting Part	Reading
1	IF Waveform	P101 (TP07)	(TP06)	(Genescope)	(CP201)	Note 1
2	MW Covering	Loop Antenna	TP08	522 kHz 530 kHz	CP151	Note 2
3	MW Tracking			603 kHz 600 kHz		

**Note 1:** Since the "IF Waveform" has been adjusted already by the maker during delivery of the AM IFT, it is not necessary to adjust it.

However, if the adjusted point deviated by mistake, readjust it in the following procedure:

- (1) When the signal from the signal generator is weak, make adjustment until the waveform becomes maximum and symmetrical as shown in Fig. 2. Increase the output of the sweep generator and adjust the waveform until the width of part C becomes as flat as possible.

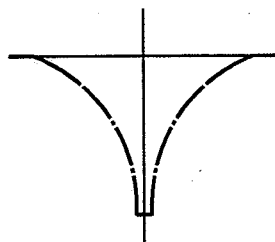


Fig. 2

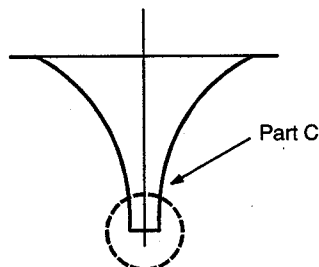


Fig. 3

- (2) For the MW covering and Tracking adjustment, follow the procedure shown below.  
 (a) Connect a DC voltmeter to TP. 4. (MW).  
 (b) Adjust CP151 (MW OSC) until the value shown in the following table is obtained.

	MW (AM)	
	E2, EK, E1 (*1)	E3 (*1)
Lower limit frequency	522 kHz	530 kHz
Reading of voltmeter	1.33 V	1.33 V

**Note 2:** Initially, set the input level to 74 dB  $\mu$ /m.

As the adjustment advances, reduce the input level to the minimum level required (approx. 60 dB  $\mu$ /m), and repeat the adjustment until the maximum output is obtained at the specified frequency.

Tracking: Since the trimmer capacitor is omitted, adjustment at the upper limit frequency is not required.

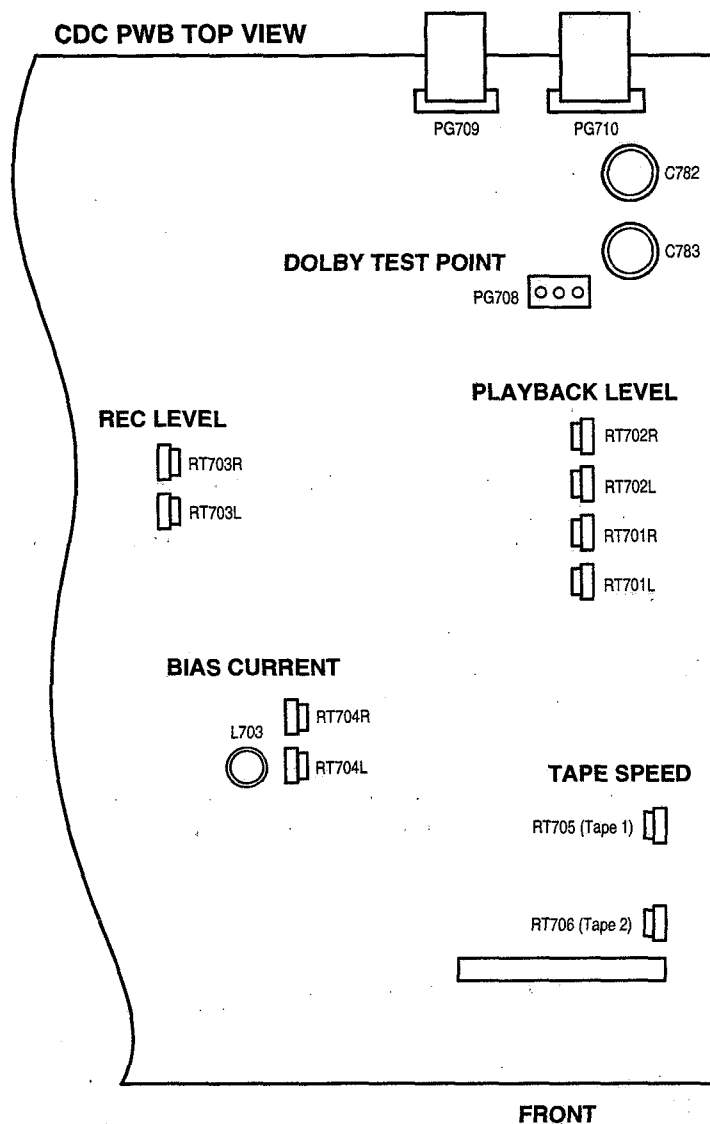
Reference Voltage of Covering

Band	Frequency	Specification		Note
		Limit (V)	Average (V)	
FM	87.5 MHz	1.3~3.7	1.5	For E2, EK (*1)
	108.0 MHz	6.0~9.0	8.1	
	87.5 MHz	1.3~3.7	2.1	For E1 (*1)
	108.0 MHz	6.0~9.0	8.5	
	87.9 MHz	1.3~3.7	2.1	For E3 (*1)
	107.9 MHz	6.0~9.0	8.48	
MW (AM)	522 kHz	1.25~1.45	1.33	For 9 kHz spacing (E2, EK, E1) (*1)
	1611 kHz	6.4~9.0	7.2	For 10 kHz spacing (E3) (*1)
	530 kHz	1.25~1.45	1.33	
	1710 kHz	6.4~9.0	7.2	

**Note (\*1):** E2: Europe model  
 EK: U.K. model  
 E1: Asia model  
 E3: U.S.A. and Canada models

## CDC SECTION

### 1. Adjustment Points



### 2. Tape speed adjustment

Input	Adjustment value	Adjustment position
Tape speed adjustment tape (TCC-112)	3000 $\pm$ 10Hz	RT705: tape1 RT706: tape2

**Note:** Perform the speed adjustment in this order.

Perform the adjustment in the FWD mode as reference and confirm the speed in RVS is within  $\pm 1.5\%$  (2955~3045) with respect to FWD.

#### Adjustment procedure

Connect the frequency counter to the Dolby rest point (PG708).

Press the play key and apply heating for 20 minutes or more and apply cooling down less than 30 seconds.

Play the adjustment tape and adjust the tape speed at the center of the tape.

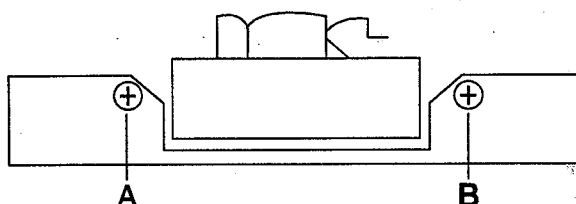
### 3. Play & Rec/Play head angle adjustment

Input	Adjustment value	Adjustment position
Angle correction tape (TCC-154)	MAX output	Head angle adjustment screw

#### Adjustment procedure

Connect the electronic voltmeter to the Dolby test point (PG708) and play the angle correction tape in FWD and RVS mode and adjust. Adjust screw A in FWD mode, and adjust screw B in RVS mode. If the maximum value of both channels are different and the difference is more than 2dB match the value of R channel to L channel by re-adjustment. Adjust the phase in both channels so that the phase is within  $\pm 45^\circ$  in both channels.

**Note:** Be sure to stop after turning the screw in tightening direction. (Backlash may occur with the screw.)



### 4. Playback output adjustment

Test tape	Output	Adjustment value
Dolby standard tape (TCC-130)	300mV $\pm 0.5$ dB	RT702L : Tape1 Lch RT702R : Tape1 Rch RT701L : Tape2 Lch RT701R : Tape2 Rch

#### Adjustment procedure

Connect the electronic voltmeter to the Dolby test point (PG708), and play the Dolby standard tape (TCC-130). Adjust RT701L/R and RT702L/R so that the reading of the voltmeter is the above value (Adjust only in FWD mode).

### 5. Recording level adjustment

Input	Output	Mode	Adjustment position
AUX	Dolby test point PG708	REC $\rightarrow$ PLAY	RT703L (Lch) RT703R (Rch)

#### Adjustment procedure

Input 400Hz, 300mV $-10$ dB (at PG708) signal to AUX.

Adjust RT703L and RT703R so that the output level at the Dolby test point (PG708) is within  $-10$ dB  $\pm 0.5$ dB when this signal is recorded and playback with Type 1 tape (Normal Position).

### 6. Bias current procedure

Input	Output	Mode	Adjustment position
AUX	Dolby test point PG708	REC $\rightarrow$ PLAY	RT704L (Lch) RT704R (Rch)

#### Adjustment procedure

Input 1.25kHz/12.5kHz, 300mV $-23$ dB (at PG708) signal to AUX.

Adjust RT704L and 704R so that the difference of play outlevel of 12.5kHz from that of 1.25kHz is within  $+2$ dB $-0$ dB (target Value  $+1$ dB) when these signals are recorded and played back with Type 1 tape (Normal Position).

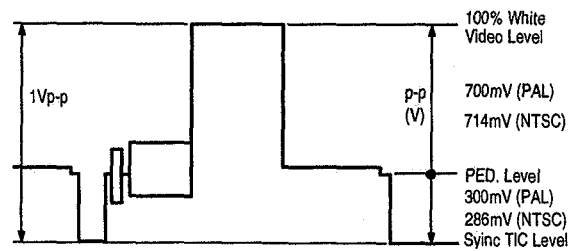
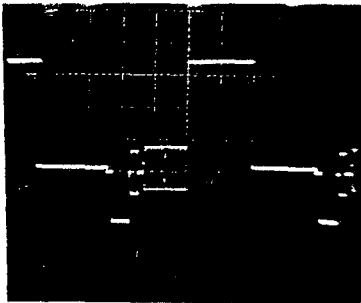
## OSD SECTION (D-1250 only)

### 1. Measurement Equipment for Adjustment

- (1) Frequency counter.
- (2) Oscilloscope (Frequency Band Range ~100MHz)
- (3) NTSC & PAL Pattern Generator
- (4) Multi Typed TV for NTSC & PAL (Should be completed measurement of TV section)

### 2. Pre-setting of output level of Pattern Generator

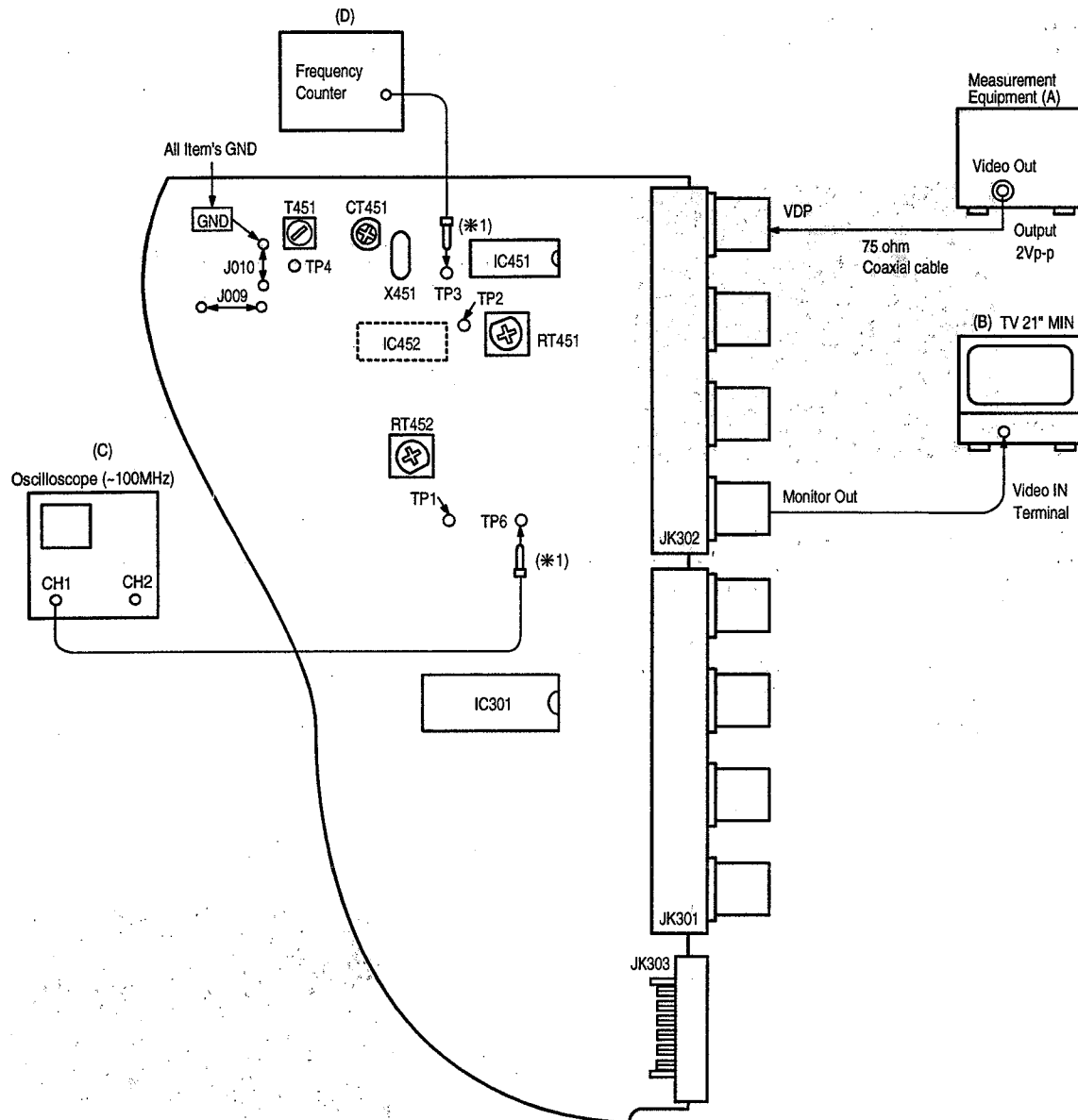
Set to 1Vp-p (at 75 ohm Terminate) output level of pattern generator. Following as below.



Mixed signal color Bar

W	Y	CY	G	MG	R	BLU	BLK	75% Color Bar
Q	-I	100% W			BLK			

### 3. Adjustment Points



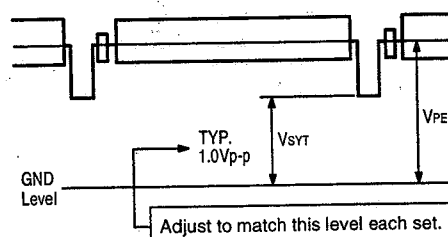
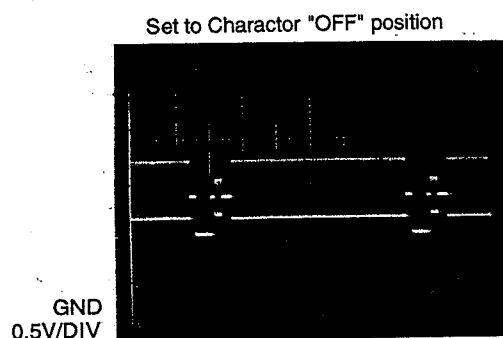
**Note:** (\*1) Should be use by 1/10 attenuated of Prove.

## 4. Adjustment

### 4-1. Clamp level of Video Signal

Match the level output from the IC452 #17 (VBSO, TP6) pin in the external video signal mode with that in the internal video signal mode.

#### (1) Internal Video signal



#### (2) Adjusting clamp level (External Video signal)

Input terminal & signal	Output terminal	Adjustment point	Adjustment
(1) VIDEO IN "VDP" Terminal  (2) Video signal * Color pattern generator "Color Bar" NTSC & PAL	TP6 (1) Connected oscilloscope	RT451	<p>GND 0.5V/DIV</p> <p>Adjust to same level #(1) → VSYT</p> <p>GND</p>

**Note1:** The internal video signal level of the IC is set by the applied voltage to the VCNT (IC'S #18) pin and "Character/ Background Luminance Level Control Command" from System Microcomputer IC603. This model is seted as follows.

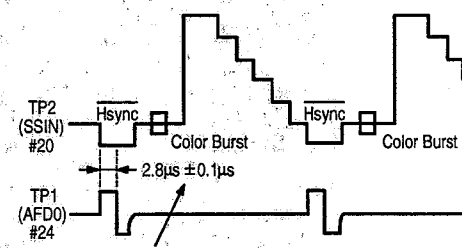
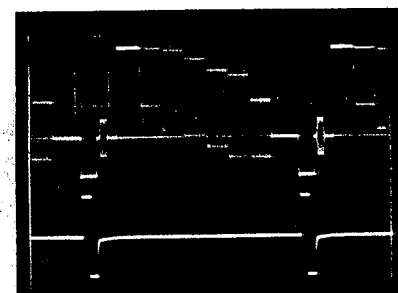
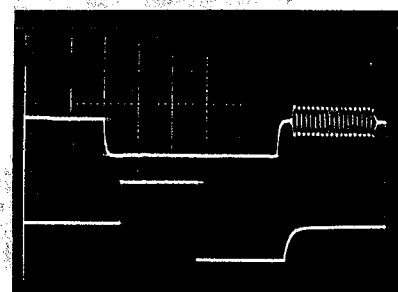
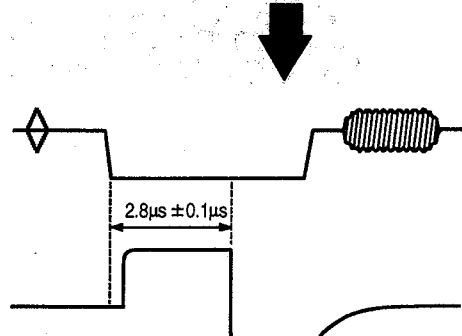
VCNT (#18) Pin Voltage	Output level control command	Internal video signal Amp. level	Sync. chip level (VSYT)	Podestal level (VPEP)
5V	Selects 2Vp-p	2Vp-p	1V (0.8~1.2)	1.58V (1.06~2.1)

\* VDD 5V tip, VSYT & VPEP: Typ. value

**Note2:** If the clamp level of the composite video signal input to the IC not match the internal video signal level of the IC, the luminance level of character and background in the external video signal mode becomes different from that in the internal video mode.

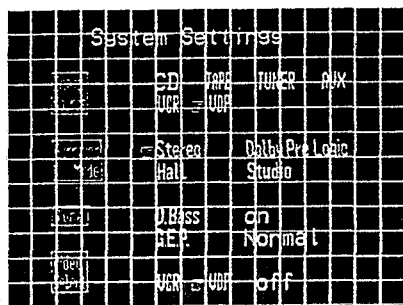
## 4-2. AFC Circuit

This IC is equipped with an AFC circuit ( $\overline{\text{Hsync}}$ ). In addition, also equipped with VCO used for the AFC circuit. The oscillation frequency (free run) of this VCO must match the frequency of  $\overline{\text{Hsync}}$ .

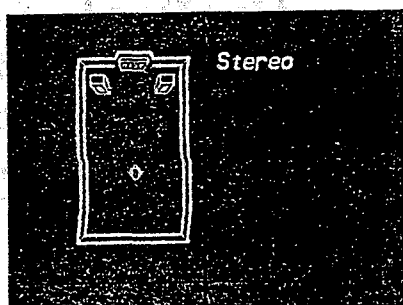
(1) Input Terminal & signal	Output terminal	Adjustment point	Adjustment
(1) Video IN "VDP" Terminal  (2) Signal "Color Bar" of Color Pattern Generator NTSC & PAL	TP1 (CH1) TP2 (CH2)  Oscilloscop use CH1 & CH2	RT452	 <p>Adjust so that this period comes <math>2.8\mu\text{s} \pm 0.1\mu\text{s}</math> after the falling edge of <math>\overline{\text{Hsync}}</math>.</p>  <p>TP1: 2V/DIV TP2: 0.5/DIV 10 <math>\mu\text{s}</math>/DIV</p>  <p>1 <math>\mu\text{s}</math>/DIV</p> 

(2) After adjustment, take off the test probe etc. from test point of the set.

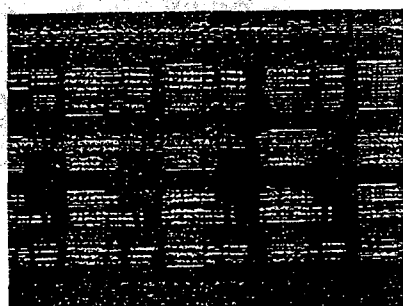
Check the character [press the OSD key "cyclical"] on screen with external video signal input.  
No good condition of follows.



Example Case 1  
"Warp" & "Fluctuation"



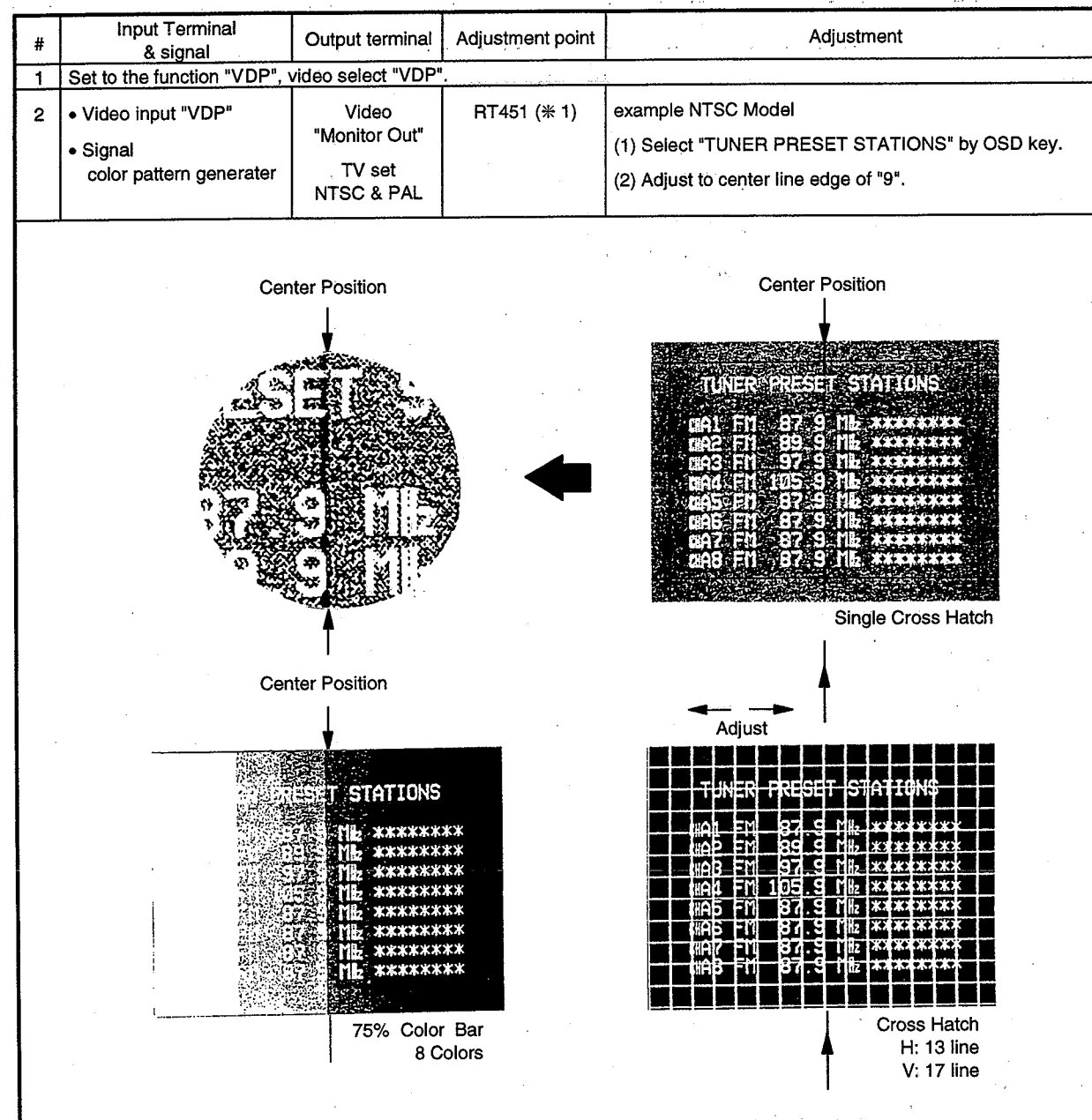
Example Case 2  
"Warp"



Example Case 3  
Get out of the character

#### 4-3. Position of Character on Screen

**Note:** Before starting this ITEM, check or adjust the position of Test pattern (TV alignment) on screen to be centered.



(\* 1) Should be used special driver for adjustment.

#### 3. Adjustment

#	Adjustment ITEMS	Output terminal	Adjustment point	Adjustment		
1	Crystal oscillation frequency	TP3 Frequency Counter	CT451	E3	NTSC	14.31818 MHz $\pm 30$ Hz
				E2, EK, E1	PAL	17.734476 MHz $\pm 30$ Hz
2	LC Oscillation Frequency (Reference)	(TP4) Frequency counter	(T451)	ITEMS #4~3 "Position of Character on screen" is prior to this adjustment. (Reference 6.5 xxx MHz~7.xxx MHz)		

4. Press the [POWER ON/STANDBY], turn to off and TEST mode is clear.

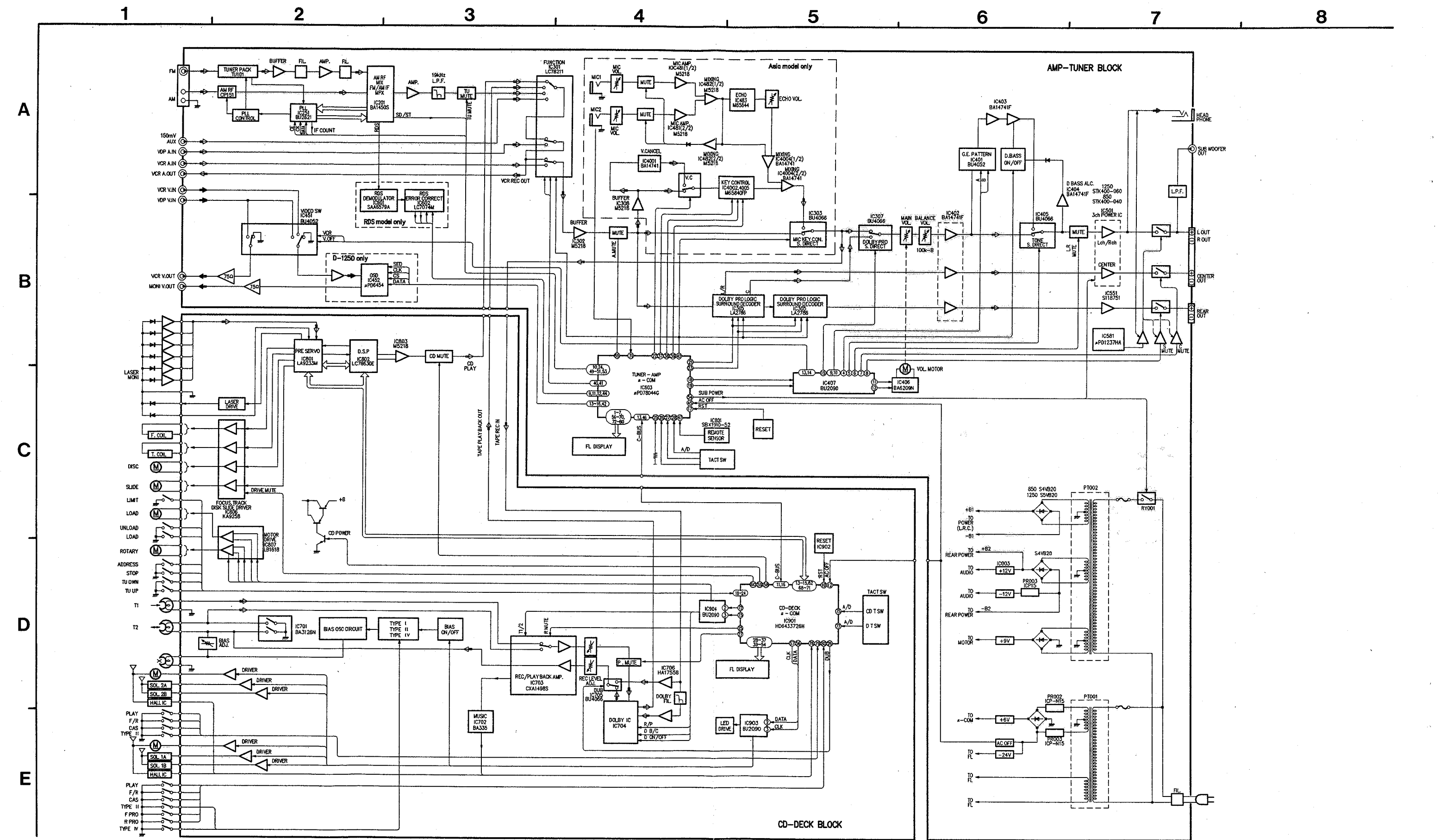
#### 4-4. Oscillation Frequency Adjustment

##### 1. Set to the set to "OSD TEST" mode.

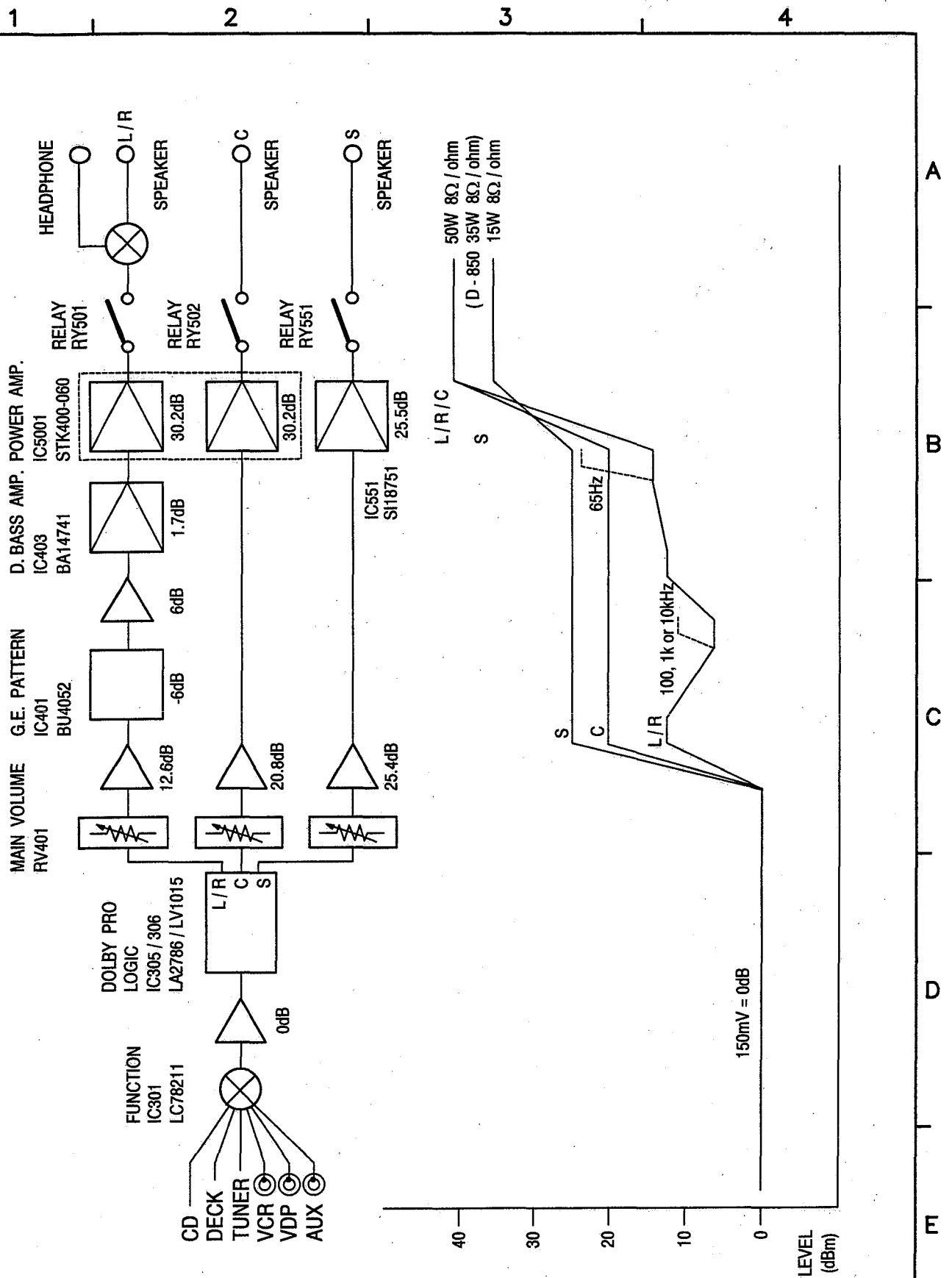
- (1) Set the set to power standby by pressing [POWER ON/STANDBY].
- (2) On the front panel, first press and hold the [OSD] button and press [POWER ON/STAND BY].
- (3) Turn the set to OSD TEST mode  
Indicated "OSD TEST ON" for a few seconds on FL panel.

##### 2. Connected to the TV set to Video Monitor out and set to blue backed on screen (No indicated character).

BLOCK DIAGRAM



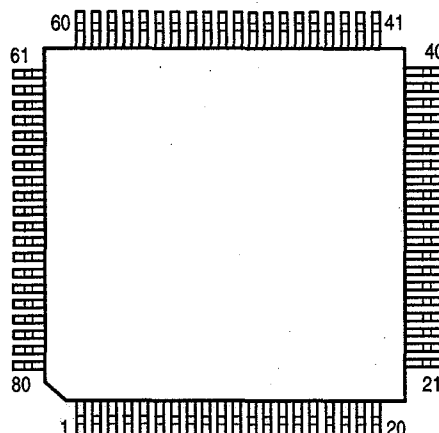
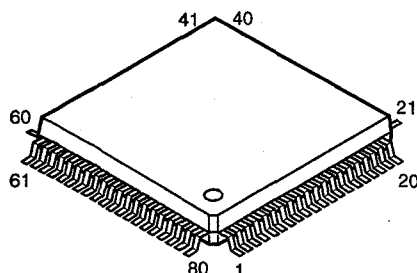
## BLOCK AND LEVEL DIAGRAM



# SEMICONDUCTORS

## ● IC's

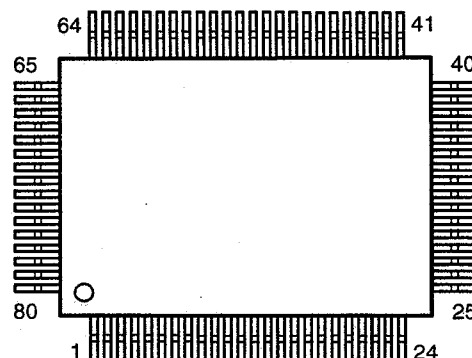
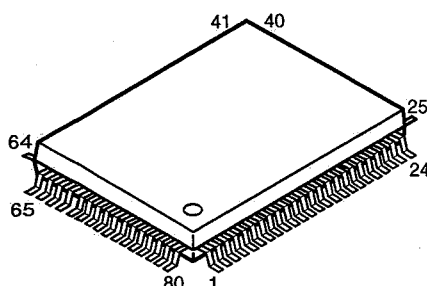
HD6433726C97H (IC901)



### HD6433726C97H (IC901) Terminal Function

Pin No.	Symbol	Port Name	I/O	Function
1	PROT F/R SW	P06/AN6	I	A/D input signal for REC Protect FWD SW/REC Protect RVS SW of deck 2 mechanism.
2	DLBY SEL	P07/AN7	I	DOLBY B/BC shifting signal (L: BC, H: only for B).
3	AVSS	AVSS	—	Ground for analog.
4	TEST	TEST	I	Test terminal (connect to Vss).
5	X2	X2	O	32.768 kHz oscillatory circuit terminal.
6	X1	X1	I	32.768 kHz oscillatory circuit terminal.
7	VSS	VSS	—	Ground.
8	OSC1	OSC1	I	8MHz ceramic oscillator connecting terminal for main system clock oscillatory circuit.
9	OSC2	OSC2	O	Main system clock oscillatory circuit terminal.
10	RESET	RES	I	Reset input signal (L: Reset).
11	CBUS IN	P10/IRQ0	I	Data input for C-BUS communication.
12	PWRDWN	P11/IRQ1	I	AC power supply detecting input signal.(L: power down, H: power OK).
13	WRQ	P12/IRQ2	I	Stand-by OK input signal from sub-code Q output of signal processor IC (equal to SCOR/SENS).
14	DRF	P13/IRQ3	I	RF level detecting input signal from servo IC (equal to FOK) (H: Focus OK, L: Focus NG).
15	FSEQ	P14/IRQ4	I	Synchronous signal detecting input from signal processor IC (equal to GFS) (H: Lock OK, L: Lock NG).
16	CBUS OUT	P15/IRQ5/T	O	Data output for C-BUS communication, normally H.
17	NC	P16/EVENT	I/O	Non connection.
18	STOP SW	P33/FS27	I	Stop SW input signal of changer mechanism. (H: no stop position, L: stop position).
19	ADRS SW	P32/FS26	I	Address SW (position SW) input signal of changer mechanism.
20	TUUP SW	P31/FS25	I	Traverse mechanism up SW input signal of changer mechanism (H: no up, L: up).
21	TUDWN SW	P30/FS24	I	Traverse mechanism down SW input signal of changer mechanism (H: no down, L:down).
22	LOAD SW	P47/FS23	I	Close SW input signal of changer mechanism (H: no close, L: close).
23	UNLOAD SW	P46/FS22	I	Open SW input signal of changer mechanism (H: open, L: no open).
24	LMTSW	P45/FS21	I	Inner circle limit SW input signal of pick-up (H: no inner circle position, L: inner circle position).
25	RMUTE	P44/FS20	O	Deck record mute output signal. (H: mute ON, L: mute OFF).
26	DUB	P43/FS19	O	Deck dubing shifting output signal (H: no in the DUB, L: in the DUB).
27	PBMUTE	P42/FS18	O	Deck playback mute output. (H: mute ON, L: mute OFF).
28	SEG15	P41/FS17	O	FL display tube segment output.
29	SEG14	P40/FS16	O	FL display tube segment output.
30	SEG13	P50/FS15	O	FL display tube segment output.

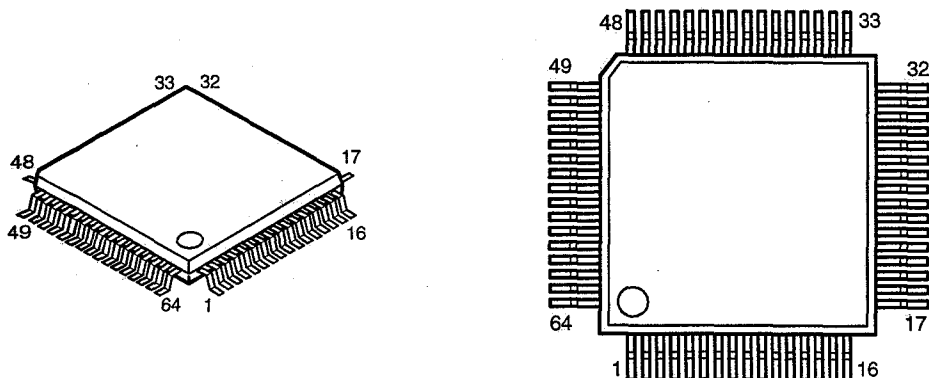
Pin No.	Symbol	Port Name	I/O	Function
31	SEG12	P51/FS14	O	FL display tube segment output.
32	SEG11	P52/FS13	O	FL display tube segment output.
33	SEG10	P53/FS12	O	FL display tube segment output.
34	SEG9	P54/FS11	O	FL display tube segment output.
35	SEG8	P55/FS10	O	FL display tube segment output.
36	SEG7	P56/FS9	O	FL display tube segment output.
37	SEG6	P57/FS8	O	FL display tube segment output.
38	VDISP	P17/VDISP	I	-30V FL power supply.
39	SEG5	P60/FD0/FS7	O	FL display tube segment output.
40	SEG4	P61/FD1/FS6	O	FL display tube segment output.
41	SEG3	P62/FD2/FS5	O	FL display tube segment output.
42	SEG2	P63/FD3/FS4	O	FL display tube segment output.
43	SEG1	P64/FD4/FS3	O	FL display tube segment output.
44	G1	P65/FD5/FS2	O	FL display tube grid output.
45	G2	P66/FD6/FS1	O	FL display tube grid output.
46	G3	P67/FD7/FS0	O	FL display tube grid output.
47	G4	P70/FD8	O	FL display tube grid output.
48	G5	P71/FD9	O	FL display tube grid output.
49	G6	P72/FD10	O	FL display tube grid output.
50	G7	P73/FD11	O	FL display tube grid output.
51	G8	P74/FD12	O	FL display tube grid output.
52	G9	P75/FD13	O	FL display tube grid output.
53	G10	P76/FD14	O	FL display tube grid output.
54	G11	P77/FD15	O	FL display tube grid output.
55	VCC	VCC	—	+5V power supply.
56	EX2 DATA	P80	O	Data output to extended output IC2.
57	EX2 CLK	P81	O	Clock output to extended output IC2.
58	CDMUTE	P82	O	CD audio mute output signal (H: mute OFF, L: mute ON).
59	CDPWR	P83	O	CD circuit power supply ON/OFF output signal (H: power ON, L: power OFF).
60	DRVMT	P84	O	Mute output signal to CD driver IC (H: mute OFF, L: mute ON).
61	NC	P85	O	Not used.
62	XRST	P86	O	Reset output signal to signal processor IC/servo IC (H: normally, L: Reset).
63	COMSYNC	P87	O	Not used.
64	COMREQ	P90/PWM	I	Not used.
65	COMCLK	P91/SCK1	O	Not used.
66	VDATA	P92/SI1	I	Not used.
67	CDDATA	P93/SO1	O	Not used.
68	CQCK	P94/SCK2	O	Clock output to signal processor IC/servo IC.
69	SUBQ	P95/SI2/CS	O	Sub-code Q data input from signal processor IC.
70	DATA	P96/SO2	O	Data output to signal processor IC/servo IC.
71	RWC	P97/UD	O	Read/Write output to signal processor IC/servo IC.
72	EX1 DATA	PA0	O	Data output to extended output IC1.
73	EX1 CLK	PA1	O	Clock output to extended output IC1.
74	AVCC	AVCC	—	Analog +5V power supply.
75	CD TACT	P00/AN0	I	A/D input signal from CD tact button.
76	REEL1/2/M	P01/AN1	I	A/D input signal from T1 REEL/T2 REEL/MUSIC of deck mechanism.
77	TAPE TACT	P02/AN2	I	A/D input signal from tape tact button.
78	TACT	P03/AN3	I	A/D input signal from other tact button.
79	T1 SW	P04/AN4	I	A/D input signal from FR SW/PLAY SW/CAS SW of deck 1 mechanism.
80	T2 SW	P05/AN5	I	A/D input signal from FR SW/PLAY SW/CAS SW of deck 2 mechanism.

**μPD78044AGF-213-3B9 (IC603)****μPD78044AGF-213-3B9 Terminal Function**

Pin No.	Symbol	Port Name	I/O	Function
1	G7	P94/FIP6	O	FL display tube grid output.
2	G6	P93/FIP5	O	FL display tube grid output.
3	G5	P92/FIP4	O	FL display tube grid output.
4	G4	P91/FIP3	O	FL display tube grid output.
5	G3	P90/FIP2	O	FL display tube grid output.
6	G2	P81/FIP1	O	FL display tube grid output.
7	G1	P80/FIP0	O	FL display tube grid output.
8	VDD	VDD	—	+5V power supply.
9	RDS CLK	P27/SCK0	I	Clock input signal from RDS IC.
10	PLL IFCNT	P26/SO0/SB1	I	Data input signal from PLL IC.
11	RDS DATA	P25/SI0/SB0	I	Data input signal from RDS IC.
12	RDS RST	P24/BUSY	O	Reset output signal to RDS IC (L: Reset).
13	OSD SDE	P23/STB	I	Synchronous detecting input signal from OSD IC.
14	OSD CLK	P22/SCK1	O	Clock output signal to RDS IC.
15	OSD DATA	P21/SO1	O	Data output signal to OSD IC.
16	OSD CS	P20/SI1	O	Chip selecting output signal to RDS IC.
17	RESET	RESET	—	Reset input signal (L: Reset).
18	EX DATA	P74	O	Data output signal to output extended IC.
19	EX CLK	P73	O	Clock output signal to output extended IC.
20	AVss	AVss	—	Ground for A/D converter.
21	DLBY EN	P17/ANI7	O	Enable output signal to DOLBY IC.
22	VC ONOFF	P16/ANI6	O	ON/OFF output signal to vocal cancel IC (L: ON, H: OFF).
23	DLBY CLK	P15/ANI5	O	Clock output signal to DOLBY IC.
24	SD	P14/ANI4	I	Tuning and stereo A/D input from tune IC.
25		P13/ANI3	I	Tune input signal for selecting user's country.
26	TACT3	P12/ANI2	I	Tact button input signal.
27	TACT2	P11/ANI1	I	Tact button input signal.
28	TACT1	P10/ANI0	I	Tact button input signal.
29	AVDD	AVDD	—	Analog +5V power supply for A/D converter.
30	AVREF	AVREF	—	Reference voltage input for A/D converter.

Pin No.	Symbol	Port Name	I/O	Function
31	MIC	P04/XT1	I	MIC input signal in existence/no existence from MIC jack. (H: with no MIC input signal, L: MIC input signal in existence.)
32	(NC)	X2	—	Non connection.
33	Vss	VSS	—	Ground.
34	X1	X1	I	4.19 MHz ceramic oscillator connecting terminal for main system clock oscillatory input.
35	X2	X2	—	4.19 MHz ceramic oscillator connecting terminal for main system clock oscillatory output.
36	SELIN	P37	I	System selecting scan input signal (L: mute ON).
37	A THU	P36/BUZ	O	Analog through/key control circuit shifting signal. (L: through, H: key).
38	KARA CLK	P35/PCL	O	Clock output signal to KARAOKE IC.
39	KARA XLT	P34/TI2	O	Latch output signal to KARAOKE IC.
40	FUNC STB	P33/TI1	O	Strobe output signal to function IC.
41	FUNC CLK	P32/TO2	O	Clock output signal to function IC.
42	FUNC DATA	P31/TO1	O	Data output signal to function IC, Key control IC and DOLBY IC.
43	CBUS OUT	P30/TO0	O	Data output signal for C-BUS communication.
44	RDS START	P03/INT3/CI0	I	Not used.
45	PWRDWN	P02/INTP2	I	AC power supply detecting input signal (L: power supply down).
46	CBUS IN	P01/INTP1	I	Data input signal for C-BUS communication.
47	REM IN	P00/INTP0/TI0	I	Remote control input signal.
48	IC	IC	—	Internal connecting terminal (connect to Vss).
49	PLL CLK	P72	O	Clock input signal to PLL IC.
50	PLL DATA	P71	O	Data output signal to PLL IC.
51	PLL CS	P70	O	Chip selecting output signal to PLL IC.
52	VDD	VDD	—	+5V power supply.
53	TMUTE	P127/FIP33	O	Tuner mute output signal (H: mute ON).
54	SUBPWR	P126/FIP32	O	Power supply circuit ON/OFF output signal (H: power supply ON).
55	AMUTE	P125/FIP31	O	Function mute signal (L: mute ON).
56	SEG15	P124/FIP30	O	FL display tube segment output.
57	SEG14	P123/FIP29	O	FL display tube segment output.
58	SEG13	P122/FIP28	O	FL display tube segment output.
59	SEG12	P121/FIP27	O	FL display tube segment output.
60	SEG11	P120/FIP26	O	FL display tube segment output.
61	SEG10	P117/FIP25	O	FL display tube segment output.
62	SEG9	P116/FIP24	O	FL display tube segment output.
63	SEG8	P115/FIP23	O	FL display tube segment output.
64	SEG7	P114/FIP22	O	FL display tube segment output.
65	SEG6	P113/FIP21	O	FL display tube segment output.
66	SEG5	P112/FIP20	O	FL display tube segment output.
67	SEG4	P111/FIP19	O	FL display tube segment output.
68	SEG3	P110/FIP18	O	FL display tube segment output.
69	SEG2	P107/FIP17	O	FL display tube segment output.
70	SEG1	P106/FIP16	O	FL display tube segment output.
71	VLOAD	VLOAD	—	—30V FL power supply.
72	G16	P105/FIP15	O	FL display tube grid output.
73	G15	P104/FIP14	O	FL display tube grid output.
74	G14	P103/FIP13	O	FL display tube grid output.
75	G13	P102/FIP12	O	FL display tube grid output.
76	G12	P101/FIP11	O	FL display tube grid output.
77	G11	P100/FIP10	O	FL display tube grid output.
78	G10	P97/FIP9	O	FL display tube grid output.
79	G9	P96/FIP8	O	FL display tube grid output.
80	G8	P95/FIP7	O	FL display tube grid output.

# LA9233M (IC801)

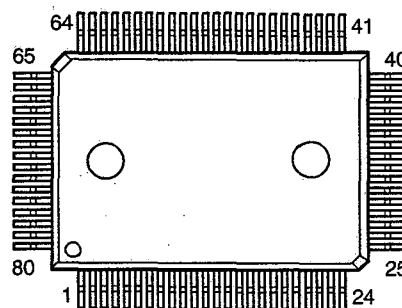
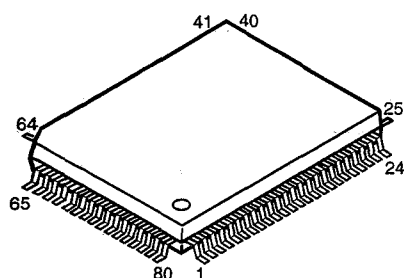


## LA9233M Terminal Function

Pin No.	Symbol	I/O	Function
1	FIN2	I	Connect with pick-up photo diode.
2	FIN1	I	Connect with pick-up photo diode.
3	E	I	Connect with pick-up photo diode.
4	F	I	Connect with pick-up photo diode.
5	TB	I	TE signal DC component input.
6	TE—	I	Connect TE signal gain setting resistor between TE terminal.
7	TE	O	TE signal output terminal.
8	TESI	I	TES (Track Error Sence) comparator input.
9	SCI	I	Shock detecting input.
10	TH	I	Setting for time constant of tracking gain.
11	TA	O	TA Amplification output.
12	TD—	I	Setting for tracking phase compensating constant between TD and VR terminal.
13	TD	O	Setting for tracking phase compensation.
14	JP	I	Setting for kick pulse amplitude of tracking jump signal.
15	TO	O	Tracking control signal output.
16	FD	O	Focusing control signal output.
17	FD—	I	Setting for focusing phase compensating constant between FD and FA terminal.
18	FA	O	Setting for focusing phase compensating constant between FD— and FA— terminal.
19	FA—	I	Setting for focusing phase compensating constant between FA and FE terminal.
20	FE	O	FE signal output.
21	FE—	I	Connect FE signal gain setting resistor between FE terminal.
22	AGND	—	Ground for analog signal.
23	SP	O	Single end output of CV+ and CV— termianl single input.
24	SPI	I	Spindle amplification input.
25	SPG		Connect with gain setting resistor when in spindle 12cm mode.
26	SP—	I	Setting for spindle phase compensating constant between SPD terminal.
27	SPD	O	Spindle control output signal.
28	SLEQ		Setting for sled phase compensating constant.
29	SLD	O	Sled control output signal.
30	SL—	I	Sled feed input signal from microcomputer.

Pin No.	Symbol	I/O	Function
31	SL+	I	Sled feed input signal from microcomputer.
32	JP—	I	Tracking jump input signal from DSP.
33	JP+	I	Tracking jump input signal from DSP.
34	TGL	I	Tracking gain control signal input from DSP (H: gain low).
35	TOFF	I	Tracking OFF control input signal from DSP. (H: OFF)
36	TES	O	TES output signal to DSP.
37	HFL		High frequency level signal.
38	SLOF	I	Sled servo OFF control input.
39	CV—	I	CLV error input signal from DSP.
40	CV+	I	CLV error input signal from DSP.
41	RFSM	O	RF output signal.
42	RFS—	I	Setting for RF gain and 3T compensating constant of EFM signal between RFSM terminal.
43	SLC	O	Slice level control signal, depend on RF waveform DSP, outputs to control data slice level.
44	SLI	I	Data slice level control signal input according to the DSP.
45	DGND	—	Ground for digital system.
46	FSC	O	Connect with focus search smoothing capacitor.
47	NC	—	Non connection.
48	NC	—	Non connection.
49	DEF	O	Disc defect detecting output signal.
50	CLK	I	Reference clock input from DSP (4.23 ,MHz).
51	CL	I	Microcomputer command clock input signal.
52	DAT	I	Microcomputer command data input signal.
53	CE	I	Microcomputer command chip enable input signal.
54	DRF	O	RF level detecting output signal.
55	NC	—	Nonconnection.
56	Vcc2	—	Vcc for digital and servo system.
57	REFI		For connecting pass capacitor with reference voltage.
58	VR	O	Reference voltage output.
59	LF2		Setting for disc defect detecting time constant.
60	PH1		For connecting capacitor with peak hold of RF signal.
61	BH1		For connecting capacitor with bottom hold of RF signal.
62	LDD	O	APC circuit output terminal.
63	LDS	I	APC circuit input terminal.
64	Vcc1	—	Vcc for RF system.

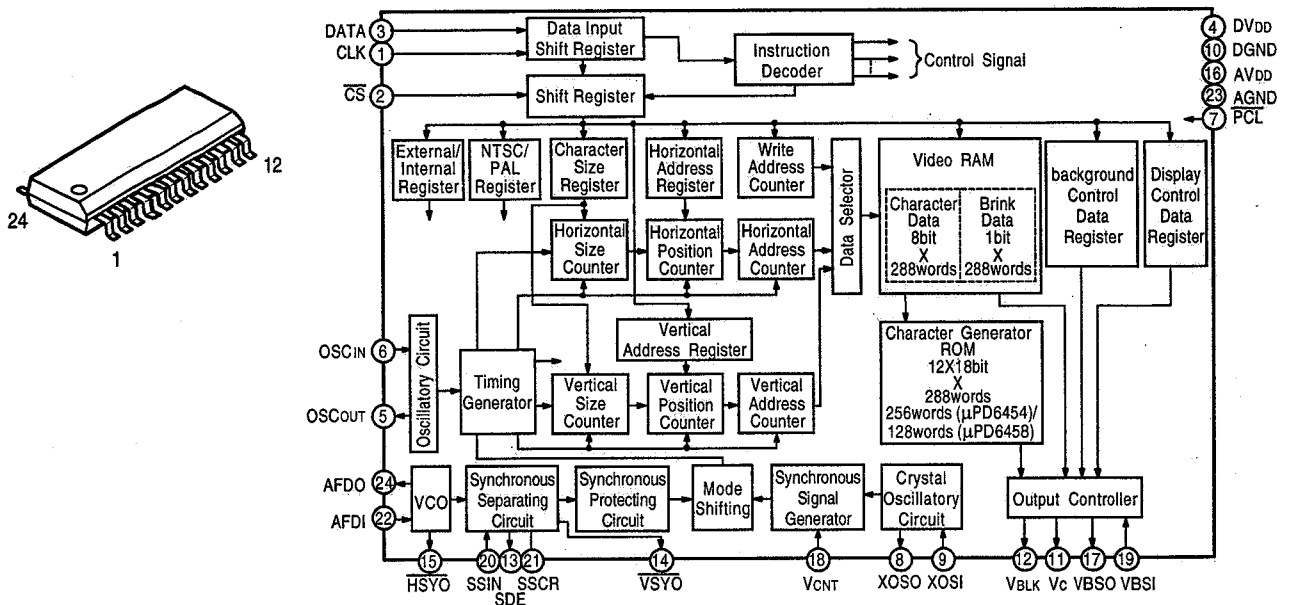
## LC78630E (IC802)



## LC78630E Terminal Function

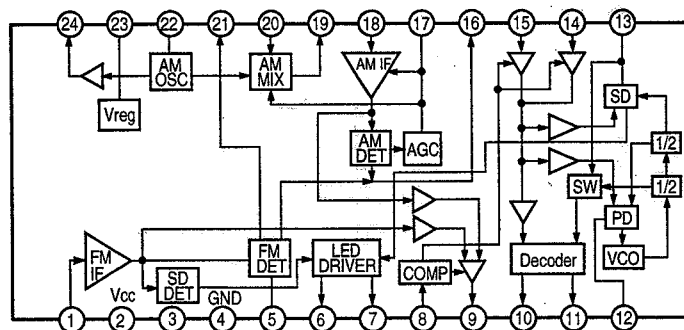
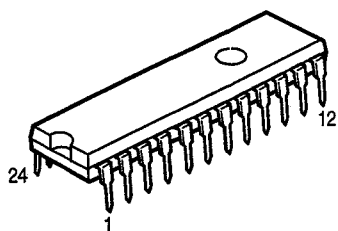
Pin No.	Symbol	I/O	Function
1	VPDO	O	Variable pitch PLL charge pump output.
2	PDO2	O	Double-speed and quad-speed mode playback PLL charge pump output.
3	PDO1	O	Normal -speed mode playback PLL charge pump output.
4	AVss	—	Analog system ground. Normally 0V.
5	FR		Built-in VCO frequency range setting resistor connection.
6	AVDD	—	Analog system power supply. Normally 5V.
7	ISET		PDO1 and PDO2 output current setting resistor connection.
8	TAI	I	Test input A pull-down resistor is built-in.
9	EFMO	O	EFM signal output.
10	Vss	—	Digital system ground. Normally 0V.
11	EFMI	I	EFM signal output.
12	TEST1	I	Test input A pull-down resistor is built-in.
13	CLV+	O	Spindle servo control output. CLV+ outputs a high level for acceleration, and CLV– outputs a high level for deceleration.
14	CLV–	O	
15	V/P	O	Rough servo/phase control automatic switching monitor output. A high-level output indicates rough servo, and a low-level output indicates phase control.
16	TEST2	I	Test input A pull-down resistor is built-in.
17	TEST3	I	Test input A pull-down resistor is built-in.
18	P4	I/O	I/O port.
19	HFL	I	Track detection signal input. This is a Schmitt input.
20	TES	I	Track error signal input. This is a Schmitt input.
21	PCK	O	EFM data playback bit clock monitor. Outputs 4.3218 MHz When the Phase is locked.
22	FSEQ	O	Synchronization signal detection output. Outputs a high level when the synchronization signal detected from the EFM signal matches the internally generated synchronization signal.
23	TOFF	O	Tracking off output.
24	TGL	O	Tracking gain switching output. Increase the gain when this pin outputs a low level.
25	THLD	O	Tracking hold output.
26	TEST4	I	Test input A pull-down resistor is built-in.
27	VDD	—	Digital system power supply. Normally 5V.
28	JP+	O	Track jump output. JP+ outputs a high level both for acceleration during outward direction jumps and for deceleration during inward direction jumps. JP– outputs a high level both for acceleration during inward direction jumps and for deceleration during outward direction jumps.
29	JP–	O	

Pin No.	Symbol	I/O	Function
30	SLD+	O	Sled output. This pin can be set to 1 of 4 levels by commands sent from the system control microprocessor.
31	SLD-	O	
32	EMPH	O	De-emphasis monitor. A high level indicates that a disk requiring de-emphasis is being played.
33	P5	I/O	I/O port.
34	LRCKO	O	LR clock output.
35	DFLRO	O	Digital filter outputs. LR data output. The digital filters can be turned off with the DFOFF command.
36	DACKO	O	
37	CONT1	O	Output port.
38	P0/DFCK	I/O	I/O port or digital filter bit clock input.
39	P1/DFIN	I/O	I/O port or digital filter data input.
40	P2	I/O	I/O port.
41	P3/DCLR	I/O	Port output or digital filter LR clock input.
42	LRSY	O	LR clock output.
43	CK2	O	Bit clock output. The polarity can be inverted with the CK2CON command.
44	ROMXA	O	ROMXA pins Interpolated data output. Data that has not been interpolated can be output by issuing the ROMXA command.
45	C2F	O	
46	MUTEL	O	Left channel mute output.
47	LVDD	—	Left channel power supply. Normally 5V.
48	LCHP	O	Left channel P output.
49	LCHN	O	Left channel N output.
50	LVSS	—	Left channel ground. Normally 0V.
51	XVSS	—	Crystal oscillator ground. Normally 0V.
52	XOUT	O	16.9344 MHz crystal oscillator connections. Use a 33.8688 MHz crystal oscillator for quad-speed playback.
53	XIN	I	
54	XVDD	—	Crystal oscillator power supply. Normally 5V.
55	RVSS	—	One-bit D/A converter pins. Right channel ground. Normally 0V.
56	RCHN	O	
57	RCHP	O	
58	RVDD	—	
59	MUTER	O	
60	SBSY	O	Subcode block synchronization signal output.
61	EFLG	O	C1 and C2 error correction state monitor.
62	PW	O	Subcode P, Q, R, S, T, U, and W output.
63	SFSY	O	Subcode frame synchronization signal output. Falls when the subcode output goes to the standby state.
64	SBCK	I	Subcode readout clock input. This is a Schmitt input.
65	DOUT	O	Digital output.
66	FSX	O	Outputs a 7.35 kHz synchronization signal generated by dividing the crystal oscillator frequency.
67	WRQ	O	Subcode Q output standby output.
68	RWC	I	Read/write control input.
69	SQOUT	O	Subcode Q output.
70	COIN	I	Input for commands from the control microprocessor.
71	CQCK	I	Command input acquisition clock. Also used as the SQOUT subcode readout clock input. This is a Schmitt input.
72	RES	I	Chip reset input. This pin must be set low temporarily when power is first applied.
73	TESTF	O	Test output.
74	CON2	O	Output port.
75	16M	O	16.9344 MHz output.
76	4.2M	O	4.2336 MHz output.
77	TEST5	I	Test input. A pull-down resistor is built in.
78	CS	I	Chip select input. A pull-down resistor is built in.
79	DEFI	I	Defect detection signal input.
80	VCOC	I	Variable pitch VCO control input.

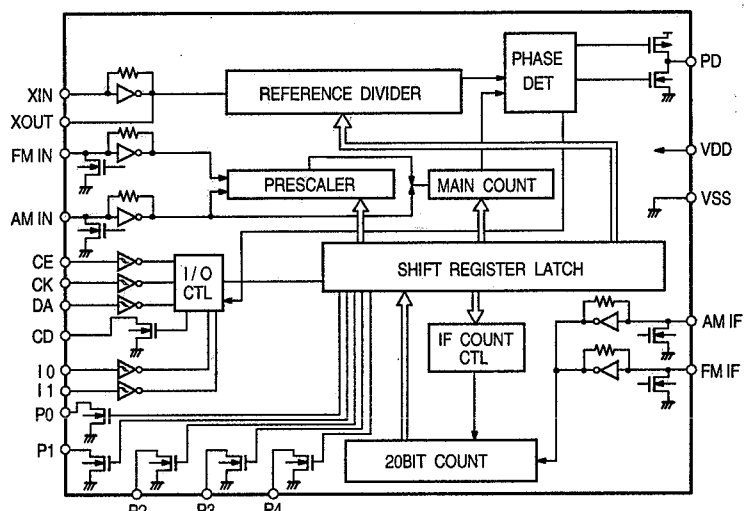
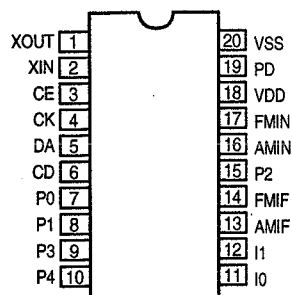
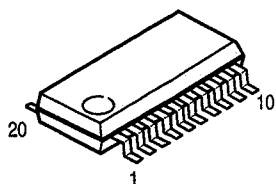
$\mu$ PD6454GT (IC452) $\mu$ PD6454GT Terminal Function

Pin No.	Symbol	I/O	Function
1	CLK	I	Clock input signal for data reading.
2	$\overline{CS}$	I	Chip selecting input signal (L: serial transmittable).
3	DATA	I	Serial data input terminal.
4	DVDD	—	Power supply for digital system.
5	OSCOUT	O	LC oscillatory circuit terminal.
6	OSCIN	I	LC oscillatory circuit terminal.
7	PCL	I	Clear at power supply ON.
8	XOSO	O	Crystal oscillatory circuit terminal.
9	XOSI	O	Crystal oscillatory circuit terminal.
10	DGND	—	Ground for digital system.
11	Vc	O	Character output signal.
12	VBLK	O	Blanking output signal.
13	SDE	O	Synchronous detecting output signal.
14	VSYO	O	Vertical synchronizing output signal.
15	HSYO	O	Horizontal synchronizing output signal.
16	AVDD	—	Power supply for analog system.
17	VB SO	O	Composite video output signal.
18	VCNT	I	Output level control signal for composite video and brightness level adjustment.
19	VBSI	I	Composite video input signal.
20	SSIN	I	Synchronous separating input signal.
21	SSCR		Connect with capacitor and resistor for synchronous separating time constant.
22	AFDI	I	VCO frequency error voltage input for AFC.
23	AGND	—	Ground for analog system.
24	AFDO	O	VCO frequency error voltage output for AFC.

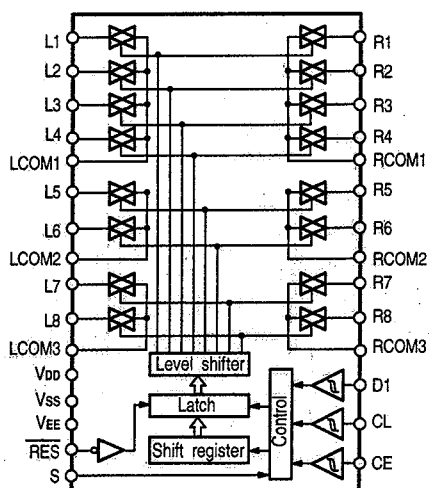
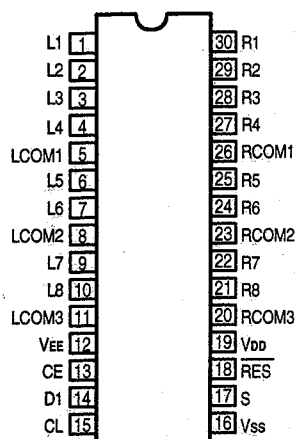
## BA1450S (IC201)



## BU2621F (IC251)

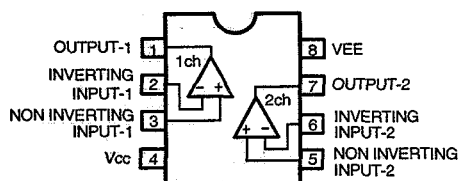
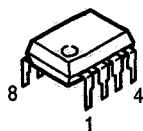


## LC78211 (IC301)



M5218AP (IC302, 308, 481, 482, 803)

HA17558HM (IC706, 707)

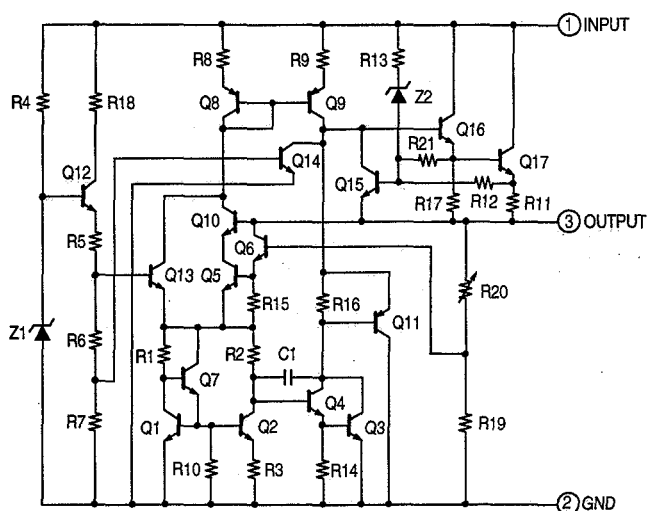
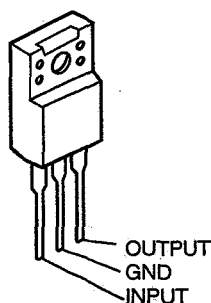


KIA7805PI (IC304, 805)

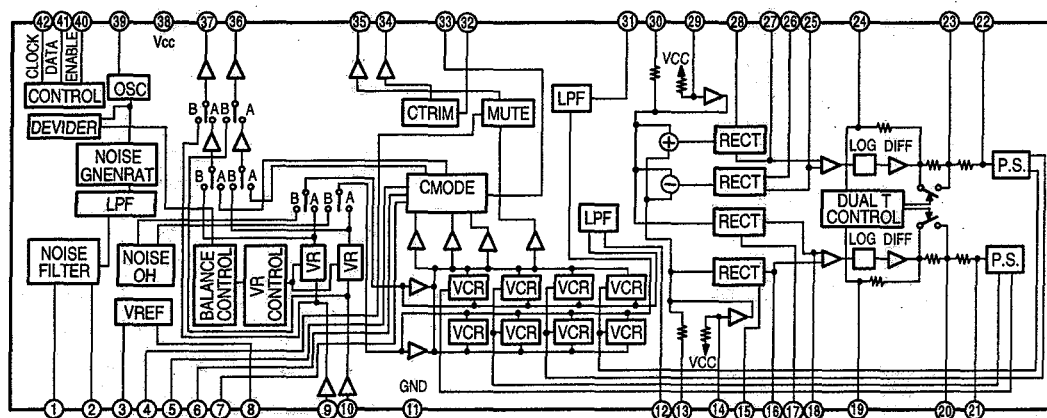
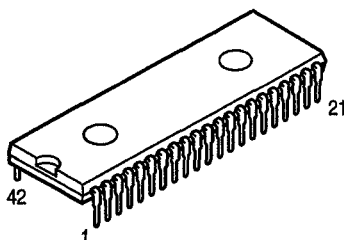
KIA7806PI (IC001)

KIA7809PI (IC002)

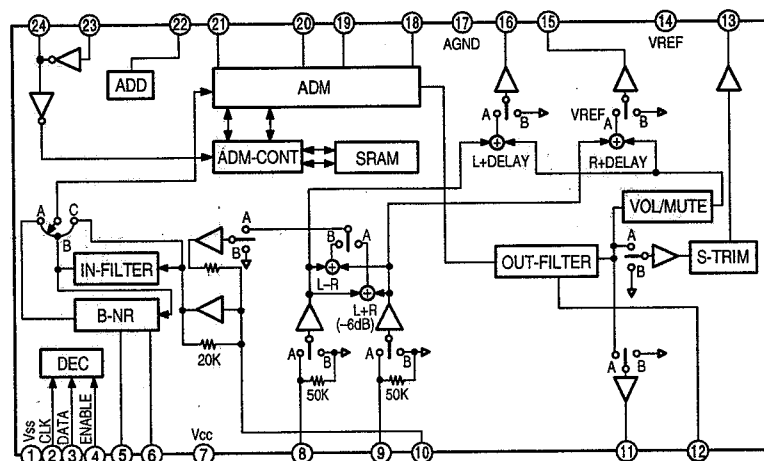
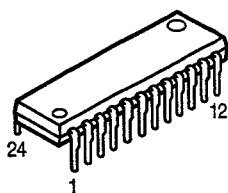
KIA7812PI (IC003)



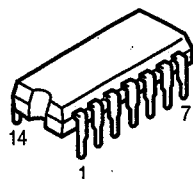
LA2786 (IC305)



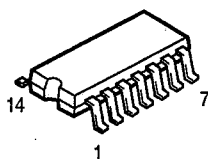
## LV1015 (IC306)



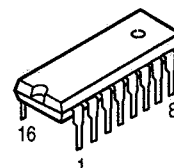
## BU4066BC (IC303, 705)



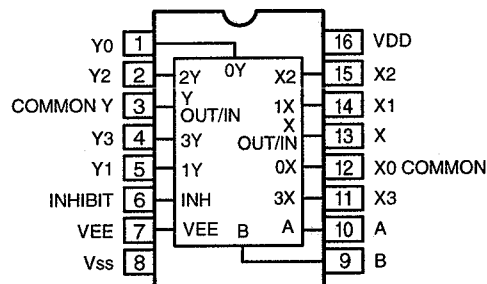
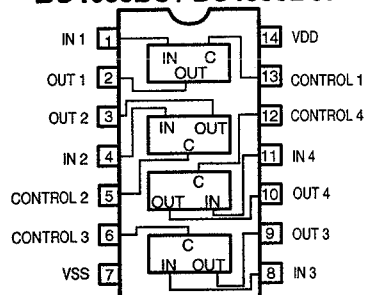
## BU4066BCF (IC307, 405)



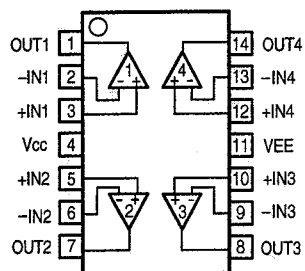
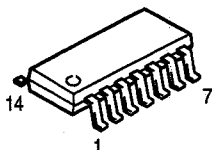
## BU4052BC (IC401, 451)



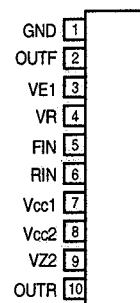
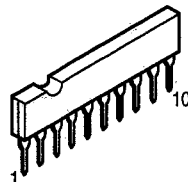
## BU4066BC / BU4066BCF



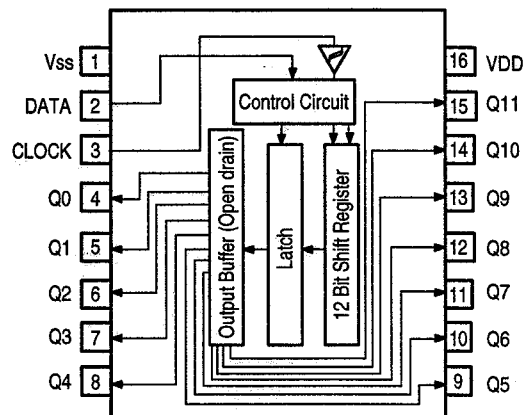
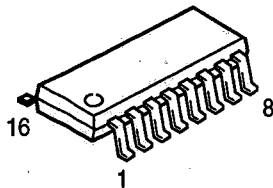
## BA14741F (IC402, 403, 404, 4001, 4004)



## BA6209N (IC406)



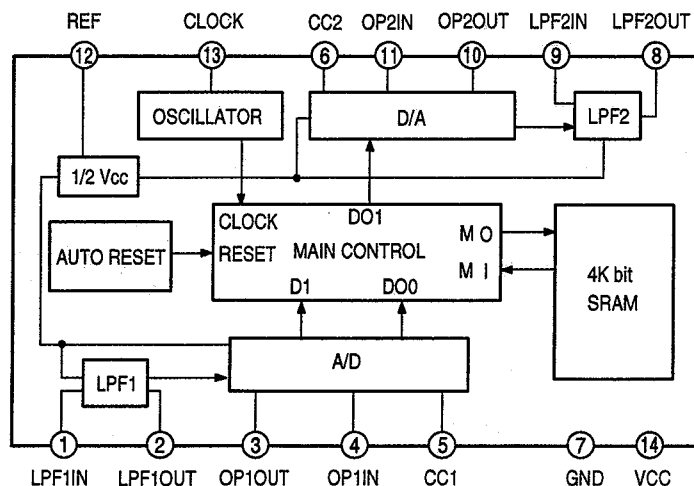
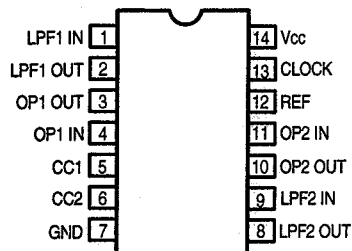
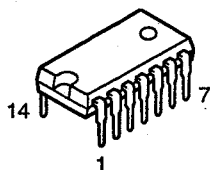
# BU2090F (IC407, 903, 904)



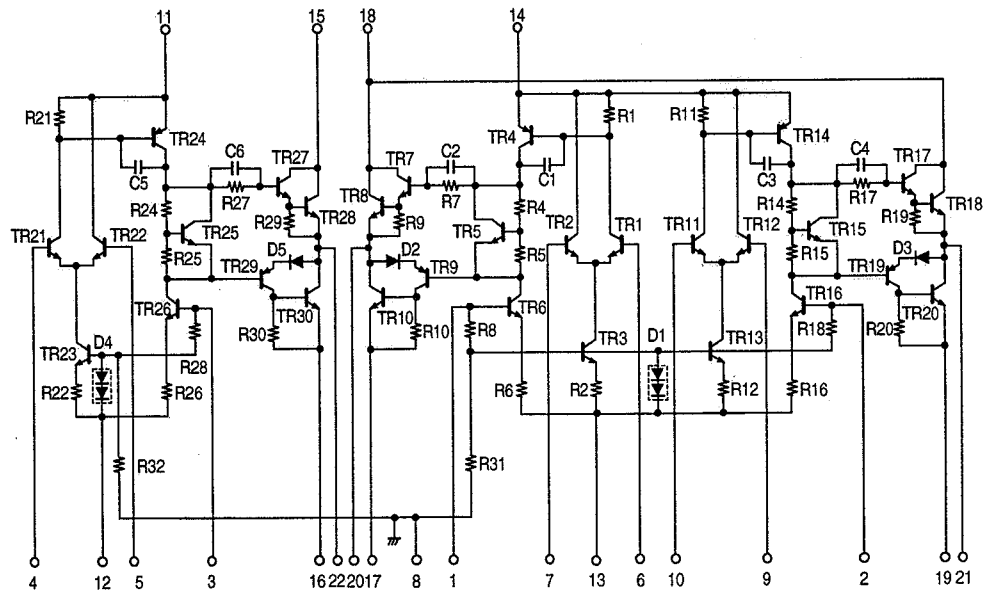
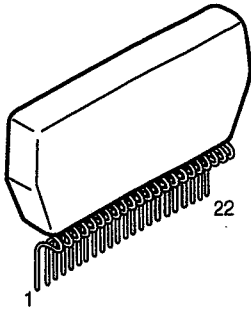
## BU2090F (IC407, 903 904)

Pin No.	Symbol	I/O	Function
1	Vss	—	GND
2	DATA	I	Serial data input.
3	CLOCK	I	Data shift clock (Rise edge trigger). If data level is "H" when clock is in the fall edge, the shift register data will be latched with output.
4~15	Q0~11	O	Parallel data output (Nch Open Drain FET) <div> <div>Latch data</div> <div>EFT Output</div> <div>L</div> <div>ON</div> <div>H</div> <div>OFF</div> </div>
16	VDD	—	Power supply.

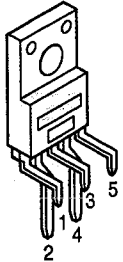
# M65844P (IC483)



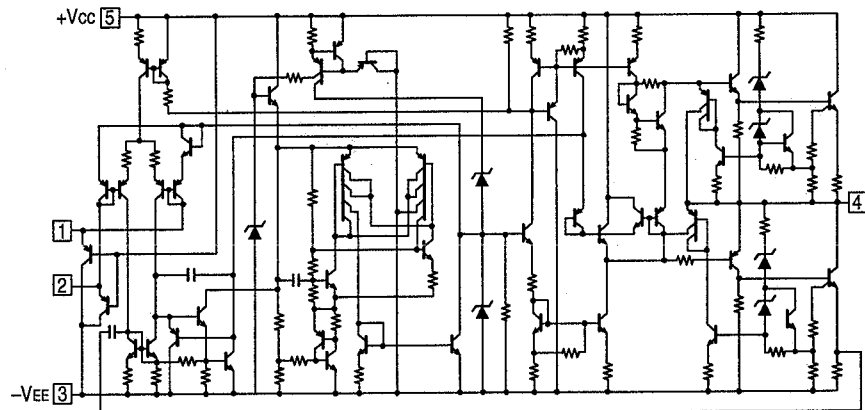
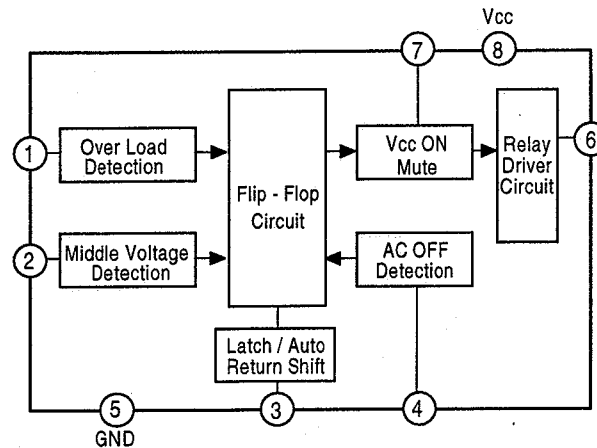
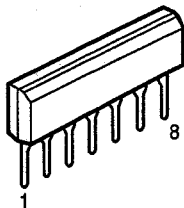
## STK400-060 (IC501)



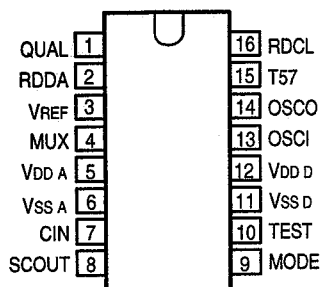
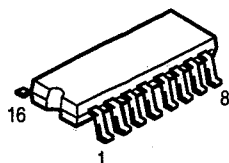
## SI18751 (IC551 L/R)



- 1: +VIN  
2: -VIN  
3: -VEE  
4: Vout  
5: +Vcc

 $\mu$ PC-1237HA (IC581)

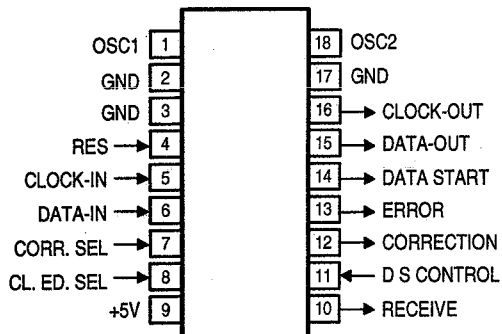
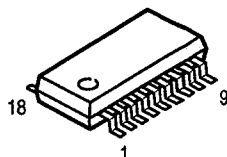
# SAA6579T (IC601)



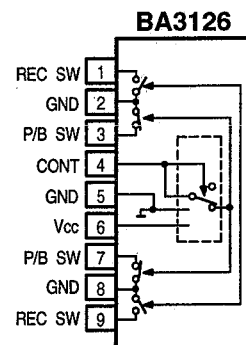
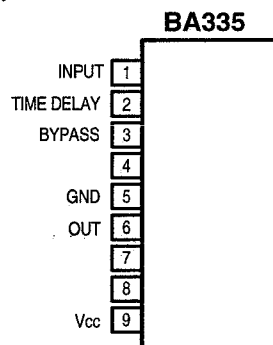
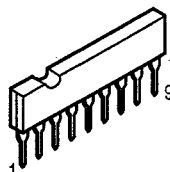
## SAA6579T Terminal Function

Pin No.	Symbol	Function
1	QUAL	Quality indication output.
2	RDDA	RDS data output.
3	Vref	Reference voltage output (0.5 VDD A).
4	MUX	Multiplex signal input.
5	VDD A	+5V power supply for analog part.
6	VSS A	Ground for analog part (0V).
7	CIN	Subcarrier input to comparator.
8	SCOUT	Subcarrier output of reconstruction filter.
9	MODE	Oscillation mode/test control input.
10	TEST	Test enable input.
11	VSS D	Ground for digital part (0V).
12	VDD D	+5V power supply for digital part.
13	OSCI	Oscillator input.
14	OSCO	Oscillator output.
15	T57	57kHz clock signal output.
16	RDCL	RDS clock output.

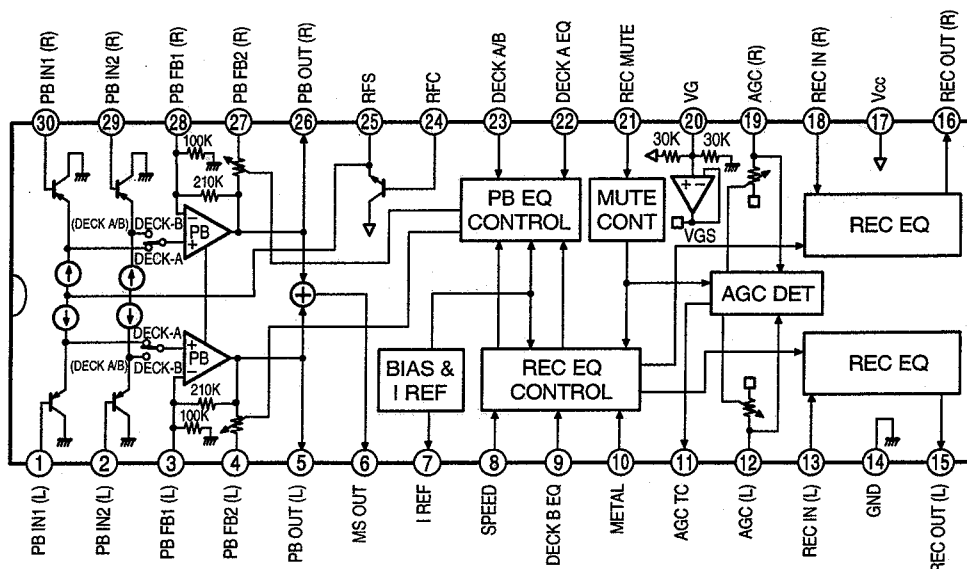
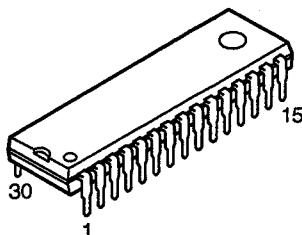
# LC7074M (IC602)



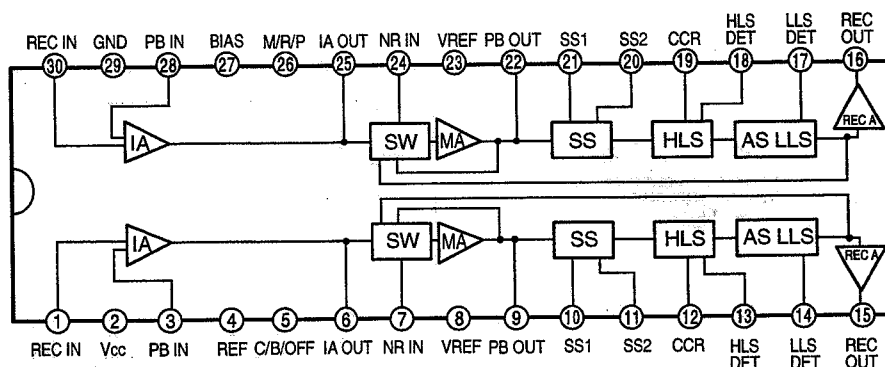
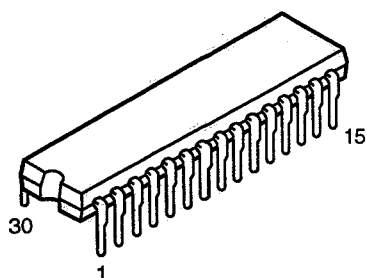
# BA3126N (IC701) BA335 (IC702)



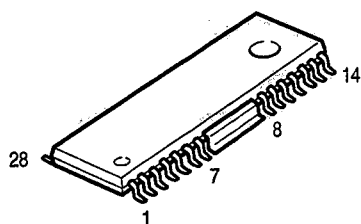
# CXA1498S (IC703)



## HA12141 (IC704)



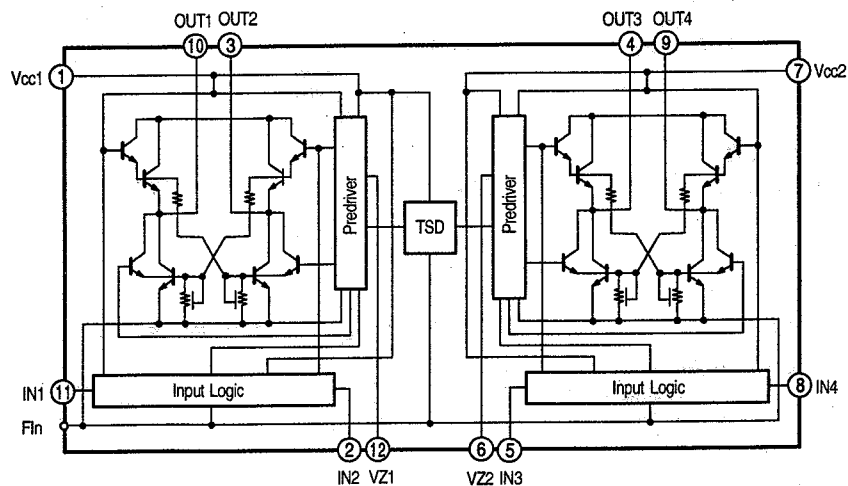
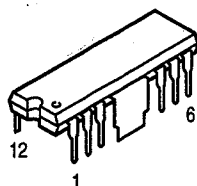
## KA9258D (IC806)



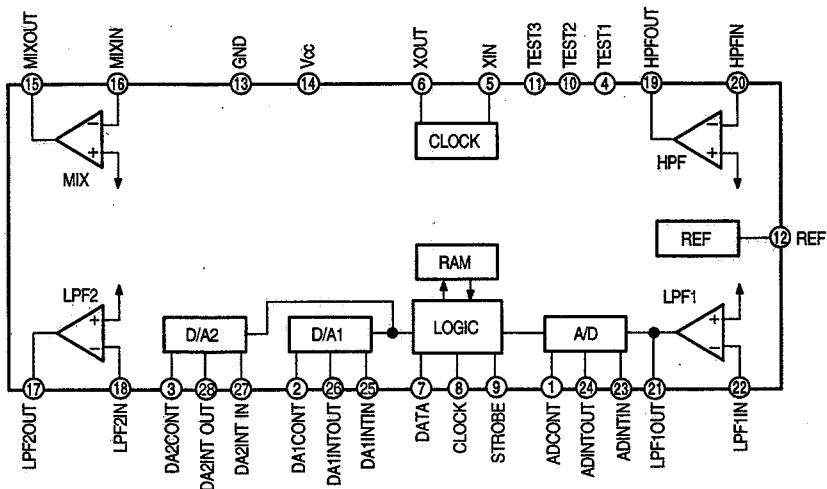
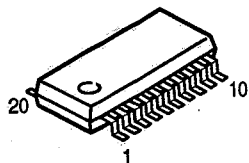
## KA9258D Terminal Function

Pin No.	Symbol	I/O	Function
1	DO1, 1	O	Drive output.
2	DO1, 2	O	Drive output.
3	DI1, 1	I	Drive input.
4	DI1, 2	I	Drive input.
5	REG		Regulator.
6	REO	O	Regulator output.
7	MUTE		Mute
8	GND1		Ground.
9	DI2, 1	I	Drive input.
10	DI2, 2	I	Drive input.
11	DO2, 1	O	Drive output.
12	DO2, 2	O	Drive output.
13	GND2		Ground.
14	OPOUT	O	OP AMP output.
15	OPIN (-)	I	OP AMP input. (-)
16	OPIN (+)	I	OP AMP input. (+)
17	DO3, 1	O	Drive output.
18	DO3, 2	O	Drive output.
19	DI3, 1	I	Drive input.
20	DI3, 2	I	Drive input.
21	VCC1		Power supply.
22	VCC2		Power supply.
23	VREF		2.5V Bias voltage.
24	DI4, 1	I	Drive input.
25	DI4, 2	I	Drive input.
26	DO4, 1	O	Drive output.
27	DO4, 2	O	Drive output.
28	GND		Ground.

## LB1648 (IC807)

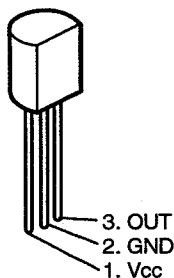


**M65840FP (IC4002, IC4005)**

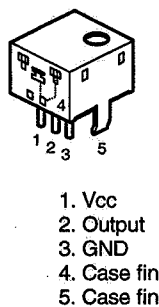


**● IC PROTECTOR**

**KIA7045P (IC902)**



**SBX1910-52 (IR 801)**

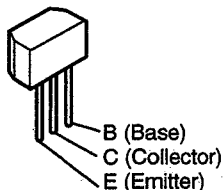


**ICP-N5 (PR003, 004, 301, 701)  
ICP-N10 (PR001, 002, 702, 703)**

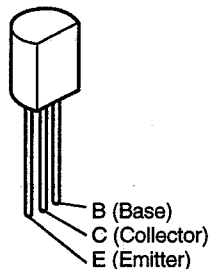


**● TRANSISTORS**

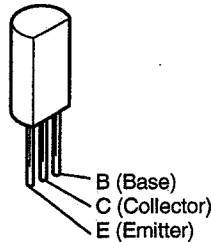
**2SA933 (S)  
2SC1740S (S)  
2SD1468S (R)  
2SC1741S (QR)**



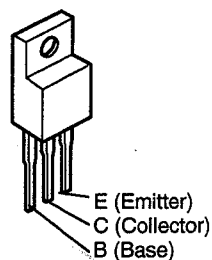
**2SA844 (E)  
2SC460 (C)  
2SK104 (F)  
HIT8050 (C)**



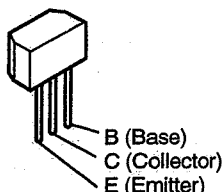
**2SC2235 (Y)  
2SB647 (C)  
HIT5609 (C)  
HIT5610 (C)**



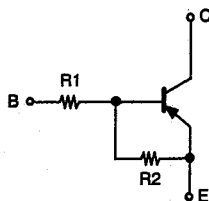
**2SA1129 (K)**



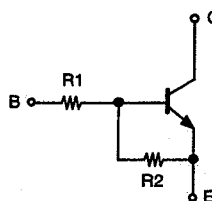
**DTA114ES  
DTC124ES**



**DTA114ES**



**DTC124ES**



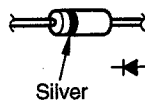
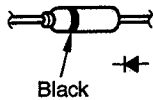
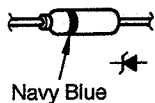
	R1	R2
DTA114ES	10 kohm	10 kohm
DTA124ES	22 kohm	22 kohm

● DIODES (included LED)

HZ3A1 HZ7A1  
 HZ3B2 HZ7B2  
 HZ4B2 HZ9A3  
 HZ4C1 HZ9B3  
 HZ4C2 HZ9C2  
 HZ5B2 HZ12A2  
 HZ6B1 HZ12B2  
 HZ6C2 HZ24-2L

1N4531

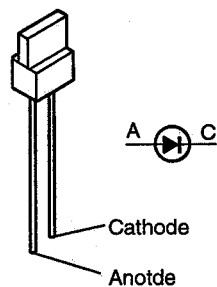
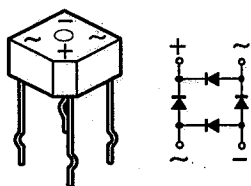
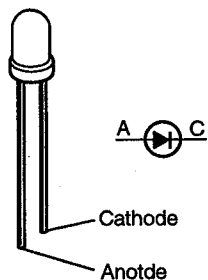
IN4001  
 IN4002



SLR342

S4VB20B (D009)  
 S5VB20 (D010)

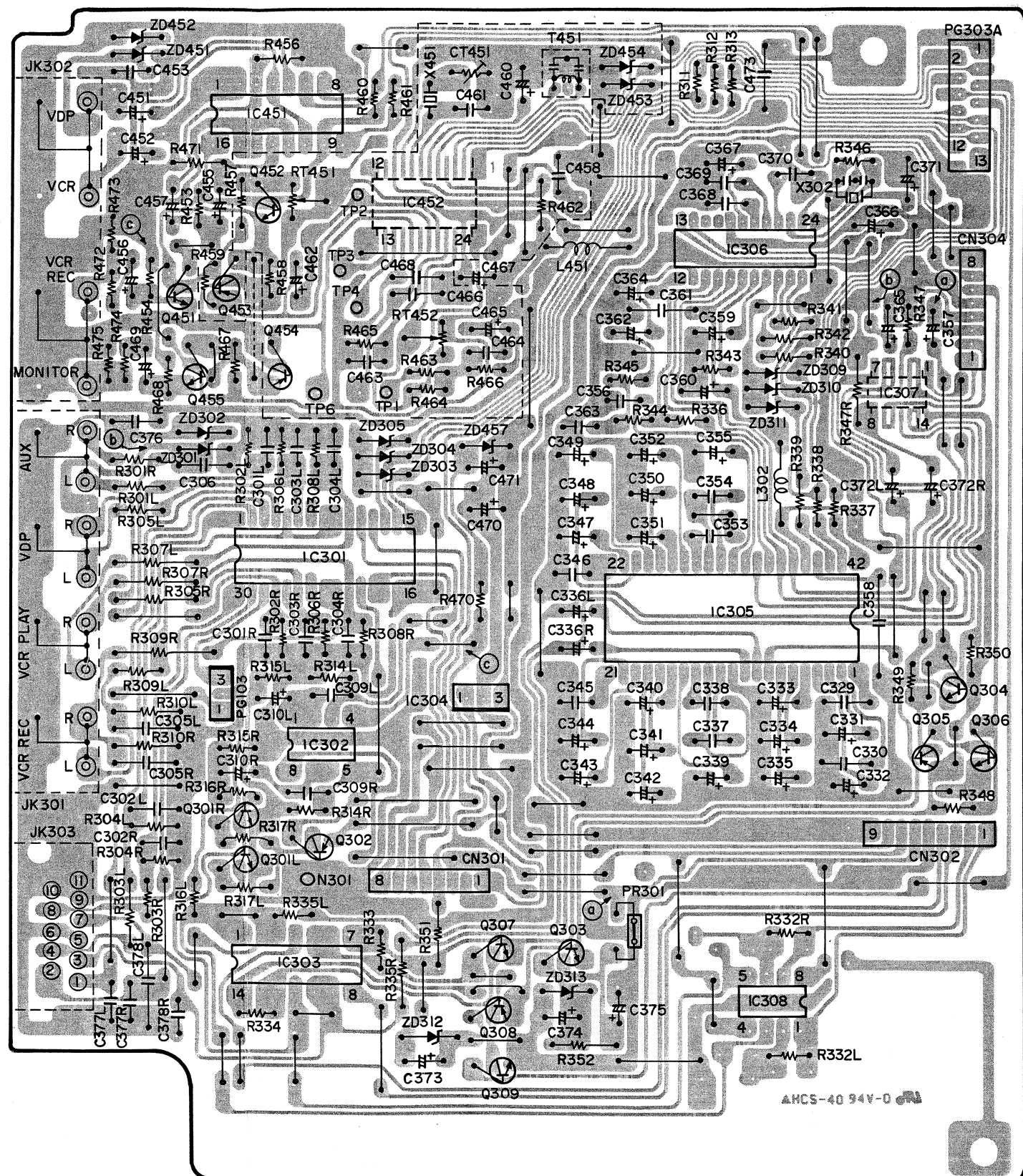
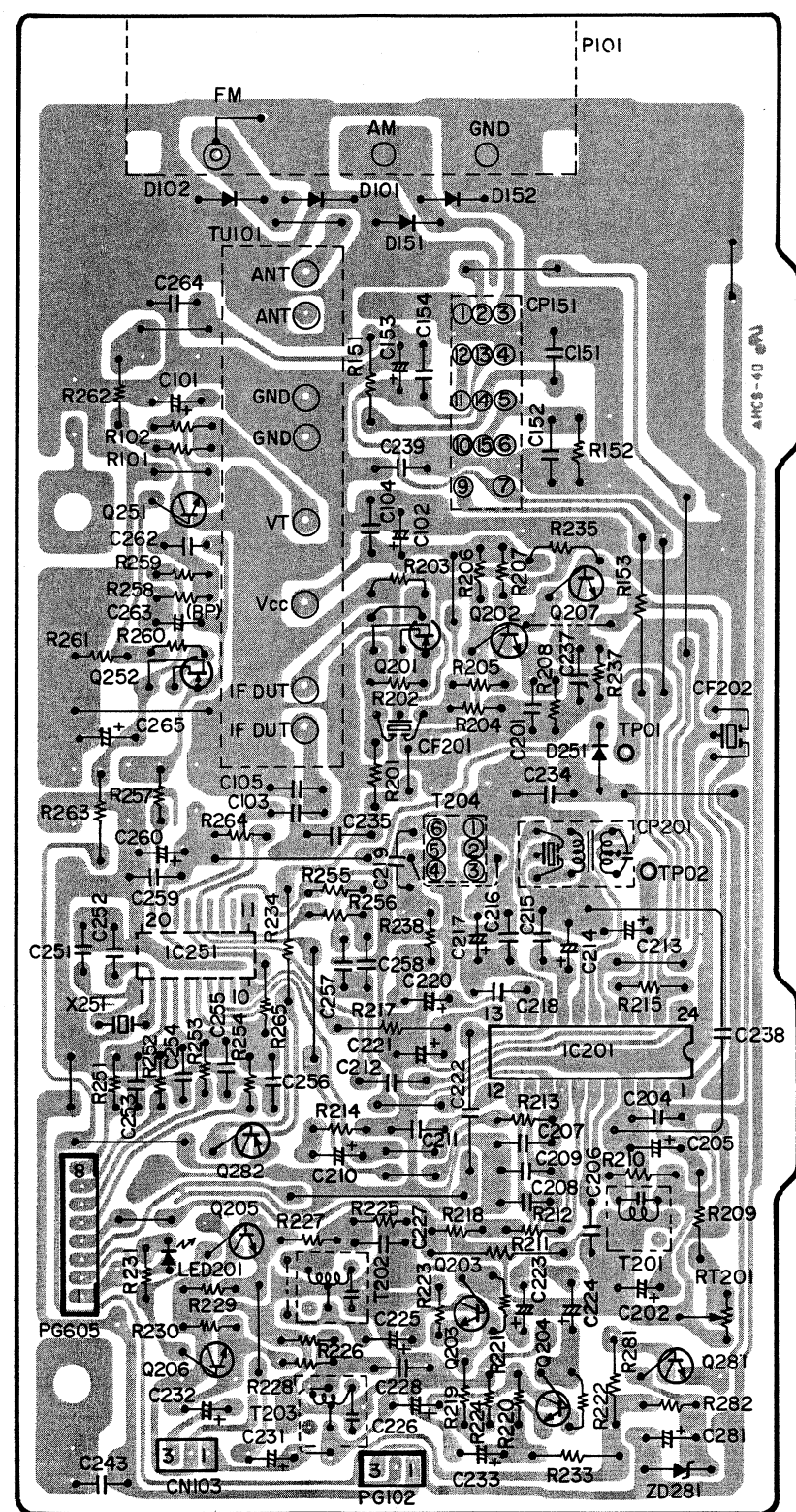
RLL20503



## PRINTED WIRING BOARD

**1**                      **2**                      **3**                      **4**                      **5**                      **6**                      **7**                      **8**

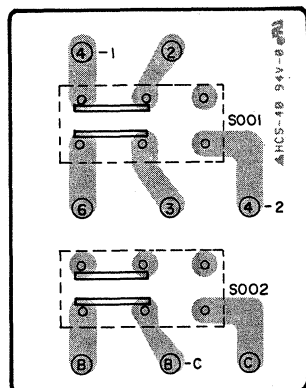
## AUDIO P.W.B. UNIT





MAIN P.W.B. UNIT

A



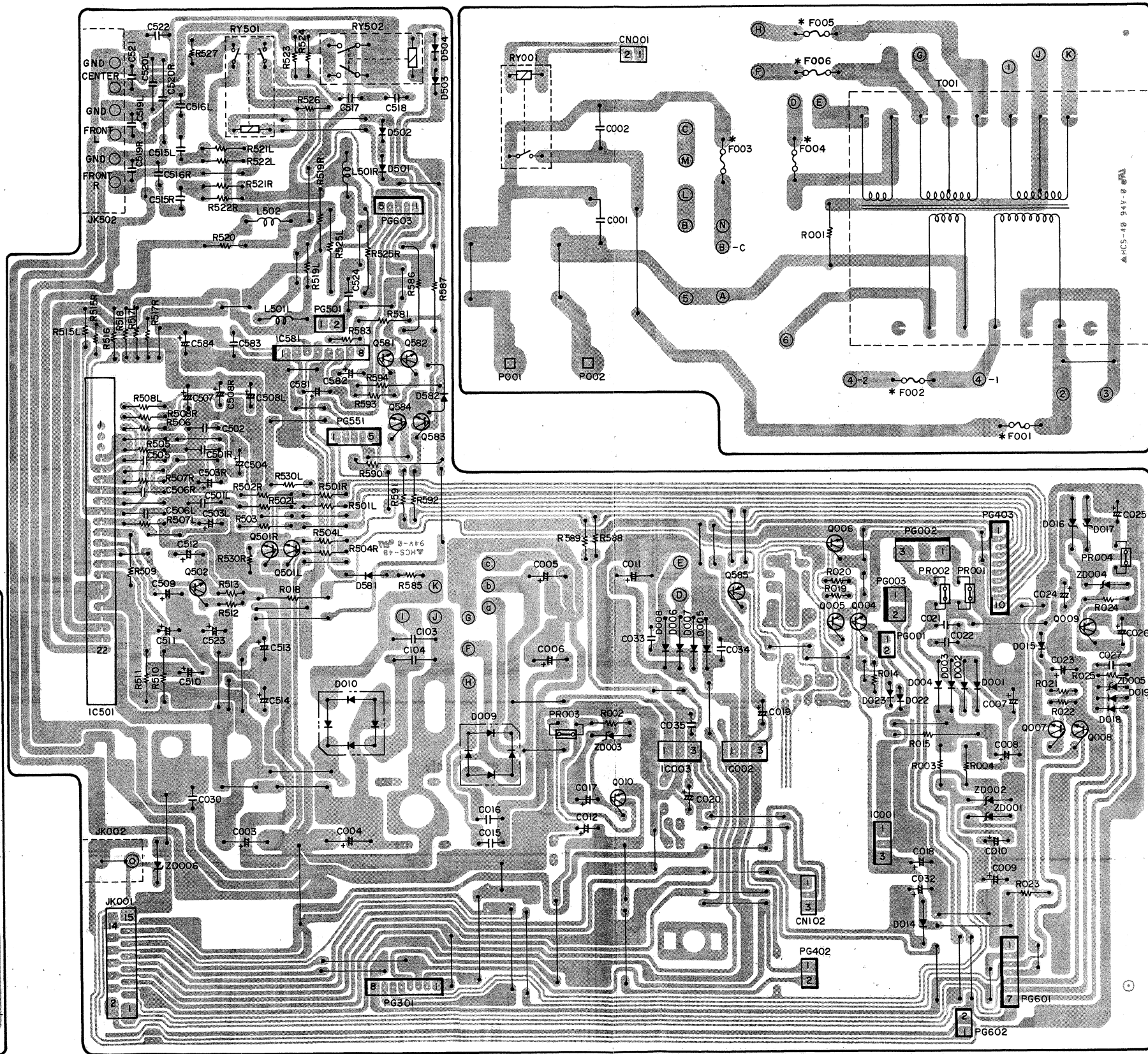
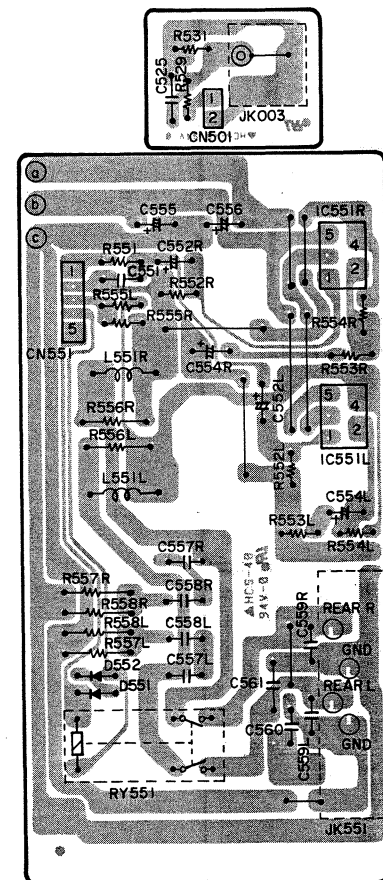
Asia model only

B

C

D

E



	Europe & U.K.	U.S.A. & Canada	Asia
* F001	T2A	4A 125V	T3.15A
* F002	—	—	T2A
* F003	T630mA	500mA 250V	T630mA
* F004	T1A	1.6A 125V	T1A
* F005	T2.5A	3A 250V	T2.5A
* F006	T2.5A	3A 250V	T2.5A

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NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol  have critical characteristics.  
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: **RN 14K 2E 182 G FR**  
Type Shape Power Resist- Allowable Others  
          and per- ance error  
          formance

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

\* Resistance

**1 8 2** ⇒ 1800 ohm = 1.8 kohm  
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: ohm

**1 R 2** ⇒ 1.2 ohm  
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: ohm

● Capacitors

Ex.: **CE 04W 1H 2R2 M BP**  
Type Shape Dielectric Capacity Allowable Others  
          and per- strength error  
          formance

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For charge and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80%	U : UL part
CP : Oil	2A : 100V	-20%	C : CSA part
CM : Mica	2B : 125V	P : +100%	W : UL-CSA type
CF : Metallized	2C : 160V	-0%	F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

\* Capacity (electrolyte only)

**2 2 2** ⇒ 2200μF  
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: μF.

**2 R 2** ⇒ 2.2μF  
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: μF.

\* Capacity (except electrolyte)

**2 2 2** ⇒ 2200pF=0.0022μF  
(More than 2) — Indicates number of zeros after effective number.  
2-digit effective number.

• Units: μF.

**2 2 1** ⇒ 220pF  
(0 or 1) — Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

P.W.B UNIT ASS'Y PARTS LIST

CDC P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP							
IC701	9L2 0202 91	IC ICL-BA3126N		Q801	272 0025 004	Transistor HIT5610C or 2SB562-C	
IC702	9L2 3684 63W	IC ICL-BA335		Q802L,802R	274 0131 004	Transistor 2SD1468S	
IC703	9L2 0087 71	IC CXA1498S		Q803	9L2 3243 62	Transistor 2SA1129K	
IC704	9LC P025 91	IC HA12141		Q804	9L2 3280 83T	Transistor 2SA844E	
IC705	262 1076 000	IC BU4066B		Q805,806	269 0062 906	Transistor DTC124ES	Built in resistor
IC706,707	9LC P006 21	IC HA17558(HM)		Q807	9L2 3280 83T	Transistor 2SA844E	
				Q808L,808R	274 0131 004	Transistor 2SD1468S	
IC801	9LC P025 21	IC LA9233M		Q901~906	273 0303 910	Transistor 2SC1740S(S)	
IC802	9LC P025 31	IC LC78630E		D701~704	276 0375 002	Diode 1N4531 or 1N4148	
IC803	263 0711 000	IC M5218AP		D705,706	9L2 3980 62T	Diode 1N4001	
IC805	9LC P024 11	IC KIA7805PI		D901	276 0375 002	Diode 1N4531 or 1N4148	
IC806	9LC K000 72	IC KA9258		ZD801	276 0185 027	Zener diode HZ4B2	4V
IC807	9LC P025 41	IC LB1648		ZD802	276 0173 042	Zener diode HZ6B1	6V
IC901	9LC P025 52	IC HD6433726C97H		ZD803	276 0185 975	Zener diode HZ4C2	4V
IC902	9LC P007 12R	IC KIA7045P		ZD804	276 0299 036	Zener diode HZ3B2	3V
IC903,904	9LC K045 31	IC BU2090F		ZD901,902	276 0303 003	Zener diode HZ6C2	6V
PR701	LA2 500U 216	IC protector ICP-N5		LED701	9LC H000 72	LED SLR342	
PR702,703	268 0072 906	IC protector ICP-N10		LED901~904	9LC H000 71	LED SLR34MC3F	
Q701L,701R	273 0303 910	Transistor 2SC1740S(S)		LED905	9LC H000 72	LED SLR342	
Q702L,702R	273 0303 910	Transistor 2SC1740S(S)		RESISTORS GROUP (Not included carbon film ±5% 1/4W)			
Q703L,703R	273 0303 910	Transistor 2SC1740S(S)		R730L,730R	9L0 1745 74M	Metal film 2.4kohm 1/4W	RN14K2E242F
Q704~709	269 0062 906	Transistor DTC124ES	Built in resistor	R808	241 0145 003	Carbon film 22ohm 1/2W	RD14B2H220J
Q710	273 0303 910	Transistor 2SC1740S(S)		R995	9L0 1745 92M	Metal film 11kohm 1/4W	RN14K2E113F
Q711,712	269 0062 906	Transistor DTC124ES	Built in resistor	R997	9L0 1745 91M	Metal film 10kohm 1/4W	RN14K2E103F
Q713	273 0303 910	Transistor 2SC1740S(S)		RT701L,701R	9L0 1603 11	Variable resistor 10kohm B	PB
Q714	274 0036 002	Transistor HIT5609C or 2SD468-C		RT702L,702R	9L0 1603 11	Variable resistor 10kohm B	PB
Q715~718	273 0303 910	Transistor 2SC1740S(S)		RT703L,703R	9L0 1603 15	Variable resistor 50kohm B	REC LEVEL
Q719	269 0046 003	Transistor DTA114ES	Built in resistor	RT704L,704R	9L0 1603 16	Variable resistor 100kohm B	BIAS
Q720	273 0303 910	Transistor 2SC1740S(S)		RT705,706	9L0 1603 13	Semi fixed resistor RT6-3V302	SPEED
Q721	274 0036 002	Transistor HIT5609C or 2SD468-C		CAPACITORS GROUP			
Q722	269 0046 003	Transistor DTA114ES	Built in resistor	C701L,701R	253 1194 933	Ceramic 680pF/50V	CK14B1H681K
Q723	273 0303 910	Transistor 2SC1740S(S)		C703L,703R	253 1194 933	Ceramic 680pF/50V	CK14B1H681K
Q724	274 0036 002	Transistor HIT5609C or 2SD468-C		C705	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
Q725	269 0046 003	Transistor DTA114ES	Built in resistor	C706,707	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M
Q726	273 0303 910	Transistor 2SC1740S(S)		C708	254 4260 029	Electrolytic 0.33μF/50V	CE04W1HR33M
Q727	274 0036 002	Transistor HIT5609C or 2SD468-C		C709	254 4195 055	Electrolytic 0.15μF/50V	CE04W1HR15M
Q728	269 0046 003	Transistor DTA114ES	Built in resistor	C710	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
Q729	273 0303 910	Transistor 2SC1740S(S)					
Q730	274 0036 002	Transistor HIT5609C or 2SD468-C					
Q731	269 0046 003	Transistor DTA114ES	Built in resistor				
Q732	273 0303 910	Transistor 2SC1740S(S)					
Q733	274 0036 002	Transistor HIT5609C or 2SD468-C					
Q734	269 0046 003	Transistor DTA114ES	Built in resistor				
Q735	273 0303 910	Transistor 2SC1740S(S)					
Q736	274 0036 002	Transistor HIT5609C or 2SD468-C					
Q737~739	269 0062 906	Transistor DTC124ES	Built in resistor				
Q740L,740R	273 0303 910	Transistor 2SC1740S(S)					

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
C711	253 1195 961	Ceramic 4700pF/16V	CC14X1C472M	C801	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M
C712	255 4199 070	Film 0.01μF/50V	CQ92M1H103K	C802	253 1194 959	Ceramic 1000pF/50V	CC14B1H102K
C713L,713R	253 1193 934	Ceramic 100pF/50V	CC14B1H101K	C803	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)
C714L,714R	253 1193 934	Ceramic 100pF/50V	CC14B1H101K	C804	255 4216 067	Film 0.033μF/50V	CQ92M1H333J(MRZ)
C715L,715R	255 4212 025	Film 0.015μF/50V	CQ92M1H153K(MRZ)	C805	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)
C716L,716R	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M	C806	253 1193 992	Ceramic 330pF/50V	CC14B1H331k
C717L,717R	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M	C807	255 4212 054	Film 0.047μF/50V	CQ92M1H473J(MRZ)
C718	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M	C808	255 4212 009	Film 0.22μF/50V	CQ92M1H224J(MRZ)
C719	255 4212 054	Film 0.047μF/50V	CQ92M1H473K(MRZ)	C809	253 1195 945	Ceramic 3300pF/16V	CC14X1C332M
C720	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C810	255 4216 067	Film 0.033μF/50V	CQ92M1H333J(MRZ)
C721	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C811	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)
C722	254 4256 033	Electrolytic 47μF/25V	CW04W1E470M	C812	253 1193 992	Ceramic 330pF/50V	CC14B1H331k
C723L,723R	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C813	255 4212 009	Film 0.22μF/50V	CQ92M1H224J(MRZ)
C724	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C814	255 1086 005	Film 0.15μF/50V	CQ92M1H154K
C725L,725R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C815	255 1009 008	Film 4700pF/50V	CQ92M1H472K
C726	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C816	253 1195 961	Ceramic 4700pF/16V	CC14X1C472M
C727L,727R	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M	C817	255 1086 005	Film 0.15μF/50V	CQ92M1H154K
C728	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C818	253 1193 992	Ceramic 330pF/50V	CC14B1H331k
C729	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C819	253 1195 945	Ceramic 3300pF/16V	CC14X1C332M
C730L,730R	255 1064 001	Film 2200pF/50V	CQ93M1H222K	C820	254 4260 016	Electrolytic 0.22μF/50V	CE04W1HR22M
C731L,731R	255 1064 001	Film 2200pF/50V	CQ93M1H222K	C821	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C732L,732R	255 1064 001	Film 2200pF/50V	CQ93M1H222K	C822	9L0 8900 01M	Ceramic 1pF/50V	CC14SL1H010M
C733L,733R	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)	C823	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C734L,734R	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)	C824	255 4216 067	Film 0.033μF/50V	CQ92M1H333J(MRZ)
C735L,735R	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M	C825	253 1194 959	Ceramic 1000pF/50V	CC14B1H102K
C736L,736R	255 1064 001	Film 2200pF/50V	CQ93M1H222K	C826	9L0 8900 11M	Ceramic 15pF/50V	CC14SL1H150J
C737L,737R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C827	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C739L,739R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C828	254 4252 040	Electrolytic 220μF/10V	CE04W1A221M
C740L,740R	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M	C829	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C741L,741R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C830	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C742L,742R	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M	C831	254 4260 029	Electrolytic 0.33μF/50V	CE04W1HR33M
C746	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C832	254 4260 061	Electrolytic 3.3μF/50V	CE04W1H3R3M
C747L,747R	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M	C833	254 4260 045	Electrolytic 1μF/50V	CW04W1H010M
C748	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C834	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C749L,749R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C835	9L0 8900 44M	Ceramic 0.022μF/50V	CC14F1H223Z
C750L,750R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C836,837	254 4252 040	Electrolytic 220μF/10V	CE04W1A221M
C751L	255 1251 908	Film 1500pF/50V	CQ92M1H152J(MRZ)	C838	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C751R	255 1120 026	Film 1500pF/50V	CQ93M1H152J	C839	253 1195 929	Ceramic 2200pF/16V	CC14X1C222M
C752L,752R	254 4278 008	Electrolytic 0.68μF/50V	CE04W1HR68M	C850	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C753	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C851	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C754L,754R	253 1195 903	Ceramic 1500pF/16V	CC14X1C152M	C852	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C755	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M	C853	255 4212 054	Film 0.047μF/50V	CQ92M1H473K(MRZ)
C760	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C854,855	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ)
C761	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C856	9L0 8900 15M	Ceramic 33pF/50V	CC14SL1H330J
C762,763	255 1066 009	Film 3300pF/50V	CQ93M1H332K	C857	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M
C764	255 1070 008	Film 6800pF/50V	CQ93M1H682K	C858,859	9L0 8900 08M	Ceramic 10pF/50V	CC14SL1H100J
C765	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M	C860	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C766	255 4120 900	Film 6800pF/100V	CQ93P2A682J	C861	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C767L,767R	253 1193 976	Ceramic 220pF/50V	CC14B1H221K	C862L,862R	253 1193 963	Ceramic 180pF/50V	CC14B1H181K
C768	255 4212 025	Film 0.015μF/50V	CQ92M1H153K(MRZ)	C863L,863R	253 1193 950	Ceramic 150pF/50V	CC14B1H151K
C780,781	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C864L,864R	253 1193 963	Ceramic 180pF/50V	CC14B1H181K
C782,783	254 4254 789	Electrolytic 1000μF/16V	CE04W1C102M	C865L,865R	9L0 8900 18M	Ceramic 56pF/50V	CC14SL1H560J

Ref. No.	Part No.	Part Name	Remarks
C866L,866R	9L0 8900 18M	Ceramic 56pF/50V	CC14SL1H560J
C867L,867R	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C868	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M
C869L,869R	253 1195 929	Ceramic 2200pF/16V	CC14X1C222M
C870	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C871~873	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C874	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M
C875	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C876,877	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C901	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C902,903	9L0 8900 11M	Ceramic 15pF/50V	CC14SL1H150J
C904,905	253 1194 959	Ceramic 1000pF/50V	CC14B1H102K
C906,907	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M
C908	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C909,910	253 1194 959	Ceramic 1000pF/50V	CC14B1H102K
C911	9L0 8900 18M	Ceramic 56pF/50V	CC14SL1H560J
C912	253 1198 913	Ceramic 0.01μF/16V	CC14Y1C103M

**OTHER PARTS GROUP**

L701L,701R	9L2 2281 04	DDL filter FB-100	
L702	9L2 2279 05M	Axial coil 10μH	
L703	9L2 1373 43	LL bias OSC coil	
L704L,704R	9L2 1508 01	Bias trap 105K	
L801	9L2 1222 39M	LA axial coil 100K	
S901~923	9L2 6396 82R	Tact switch	
X801	399 0036 013	Crystal 16.9MHz	
X901	399 0160 002	Resonator CST8.0MTW	
X902	9L2 1684 91	Crystal DT-38	
FL901	9LD D000 21 9LN J016 41	FL tube 11-BT-148GK FL holder	
PG701	9L2 6742 62	MX 2MM 3P pin post	
PG702	9L2 6742 65	MX 2MM 6P pin post	
PG703	9L2 6742 61	MX 2MM 2P pin post	
PG704	9L2 6585 73W	TXL 4P plug	
PG705	9L2 9590 61	11P PH pin post	
PG706	9L2 6742 63	MX 2MM 4P pin post	
PG707	9L2 9590 62	12P PH pin post	
PG708	9L2 6586 72W	TXL 3P pin post	
PG709	9L2 6746 09	11P wire trap	
PG710	9LE D004 84	PLGJ 52004-1510	
PG801	9LE D008 91	16P FFC connector	
PG802	9L2 9590 55	6P PH plug	
PG803	9LE D009 01	6P UP pin post (white)	

Ref. No.	Part No.	Part Name	Remarks
PG804	9LE D009 02	6P UP pin post (black)	
PG805	9L2 9590 52	3P PH pin post	
PG901	9L2 6586 91W	TXL P02P M1(right angle)	
PG902	9L2 6586 77W	TXL 8P pin post	
PG903	9L2 6586 71W	TXL 2P pin post	
PG904	9L2 6989 81	30P FFC connector	
PG905	9L2 6989 91	30P FFC connector	
W901	9LE K002 31	30P FFC cable	
JK901	9LE R002 41	1P US pin jack	
N701	9L2 6875 82W	Earth terminal	
CN901	9L2 7116 32A	2P TXL connector(S) L=150mm	
CN902	9L2 7116 97A	8P TXL connector L=400mm	
CN903	9L2 7116 34A	2P TXL connector(S) L=250mm	
TP1~5	9L5 7152 31	1P SQ pin	

## AUDIO P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC001			
IC201	9LC P025 61	IC BA1450S	
IC251	9LC K044 61	IC BU2621F	
IC301	9L2 3016 92W	IC LC78211	
IC302	263 0711 000	IC M5218AP	
IC303	9L2 3631 97	IC BU4066 BC	Asia model only
IC304	9LC P024 11	IC KIA7805PI	
IC305	9LC P025 11	IC LA2786	
IC306	9LC P025 01	IC LV1015	
IC307	262 1875 007	IC BU4066BCF	
IC308	263 0711 000	IC M5218AP	Asia model only
IC451	9L2 0084 32	IC BU4052BC	
IC452	9LC K044 11	IC $\mu$ PD6454GT	
PR301	LA2 500U 216	IC protector ICP-N5	
Q201	9L2 3288 02R	Transistor 2SK104(F)	Europ, U.K. models only
Q202	973 0057 904	Transistor 2SC460PC	
Q203~206	273 0303 910	Transistor 2SC1740S(S)	
Q207	973 0057 904	Transistor 2SC460PC	Europ, U.K. models only
Q251	273 0303 910	Transistor 2SC1740S(S)	
Q252	9L2 3288 02R	Transistor 2SK104(F)	
Q281	274 0038 000	Transistor HIT8050C or 2SD467-C	
Q282	269 0046 003	Transistor DTA114ES	Built in resistor
Q301L,301R	273 0303 910	Transistor 2SC1740S(S)	
Q302	269 0046 003	Transistor DTA114ES	Built in resistor
Q303	274 0036 002	Transistor HIT5609C or 2SD468-C	
Q304	269 0062 906	Transistor DTC124ES	Built in resistor
Q305	269 0046 003	Transistor DTA114ES	Built in resistor
Q306	269 0062 906	Transistor DTC124ES	Built in resistor
Q307	269 0062 906	Transistor DTC124ES	Asis model only
Q308	269 0046 003	Transistor DTA114ES	Asis model only
Q309	269 0062 906	Transistor DTC124ES	Asis model only
Q451,452	273 0303 910	Transistor 2SC1740S(S)	
Q453,454	271 0192 002	Transistor 2SA933(S)	
Q455	273 0303 910	Transistor 2SC1740S(S)	
D101,102	276 0375 002	Diode 1N4531 or 1N4148	
D151,152	276 0375 002	Diode 1N4531 or 1N4148	
D251	276 0375 002	Diode 1N4531 or 1N4148	

Ref. No.	Part No.	Part Name	Remarks
ZD281	276 0303 003	Zener diode HZ6C2	6V
ZD301~305	276 0464 900	Zener diode HZ7A1	7V
ZD309~311	9W2 3318 26	Zener diode HZ9B3	9V
ZD312	9W2 3318 23	Zener diode HZ9A3	9V
ZD313	276 0496 015	Zener diode HZ9C2	9V
ZD451~454	276 0464 900	Zener diode HZ7A1	7V
ZD457	276 0459 915	Zener diode HZ5B2	5V
LED201	9L2 3973 14	LED RLL-20503PD-R15(S)	
<b>RESISTORS GROUP (Not included carbon film <math>\pm 5\%</math> 1/4W)</b>			
R234	241 0157 004	Carbon film 68ohm 1/2W	RD14B2H680J
R281	241 0163 001	Carbon film 120ohm 1/2W	RD14B2H121J
R336	9L0 1745 98M	Metal film 20kohm 1/4W	RN14K==203F
RT201	211 6079 907	Semi fixed resistor 10kohm	
RT451	9L0 1603 28	Semi fixed resistor 50kohm	
RT452	9L0 1603 25	Semi fixed resistor 100kohm	
<b>CAPACITORS GROUP</b>			
C101	254 9014 005	Electrolytic 0.1 $\mu$ F/50V	CE04W1H0R1M
C102	254 4256 046	Electrolytic 100 $\mu$ F/25V	CE04W1E101M
C103	9L0 8900 35M	Ceramic 1000pF/50V	CK14B1H102K
C104	9L0 8900 44M	Ceramic 0.022 $\mu$ F/50V	CK14F1H223Z
C105	9L0 8900 13M	Ceramic 22pF/50V	CK14SL1H220J
C151	255 1076 002	Film 0.022 $\mu$ F/50V	CQ93M1H223K
C152	9LH 2306 51	Ceramic 8.2pF/50V	CK14CH1H8R2K
C153	254 4252 037	Electrolytic 100 $\mu$ F/10V	CE04W1A101M
C154	9L0 8900 44M	Ceramic 0.022 $\mu$ F/50V	CK14F1H223Z
C201	9L0 8900 44M	Ceramic 0.022 $\mu$ F/50V	CK14F1H223Z
C202	254 4256 046	Electrolytic 100 $\mu$ F/25V	CE04W1E101M
C204	9LH 2400 67	Ceramic 0.047 $\mu$ F/16V	CK14F1C473Z
C205	254 4260 045	Electrolytic 1 $\mu$ F/50V	CE04W1H010M
C205	254 4260 074	Electrolytic 4.7 $\mu$ F/50V	CE04W1H4R7M
C206,207	9L0 8900 43M	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M
C208,209	255 1121 054	Film 0.018 $\mu$ F/50V	CQ93M1H183K
C208,209	255 1072 006	Film 0.01 $\mu$ F/50V	U.S.A., Canada models only
C210	254 4260 016	Electrolytic 0.22 $\mu$ F/50V	CQ93M1H103K
C211	9LH 2400 67	Ceramic 0.047 $\mu$ F/16V	Except U.S.A., Canada models
			CE04W1HR22M
			CK14F1C473Z

Ref. No.	Part No.	Part Name	Remarks
C212	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C213	254 4260 061	Electrolytic 3.3μF/50V	CE04W1H3R3M
C214	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C215	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z
C216	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K Except Europe, U.K. models
C218	9L0 8900 41M	Ceramic 6800pF/16V	CK14X 1C682M
C217	254 4256 907	Electrolytic 10μF/25V	CE04W1E100M
C218	9L0 8900 41M	Ceramic 6800pF/16V	CK14X1C682M
C219	9L0 8900 17M	Ceramic 47pF/50V	CC45SL1H470J Europe, U.K. models only
C220,221	254 4256 907	Electrolytic 10μF/25V	CE04W1E100M
C222	9L0 8900 27M	Ceramic 270pF/50V	CK14B1H271K Except Asia model
C223-226	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C227,228	9L0 8900 39M	Ceramic 4700pF/16V	CK14X1C472M Europe, U.K. models only
C231,232	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C233	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C234	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z
C235	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z Except Europe, U.K. models
C235	9LH 2400 67	Ceramic 0.047μF/16V	CK14F1C473Z Europe, U.K. models only
C237	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z Europe, U.K. models only
C238	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z
C239	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M Except Europe, U.K. models
C241,242	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z
C251,252	253 3131 907	Ceramic 27pF/50V	CC45SL1H270J
C253-256	9L0 8900 17M	Ceramic 47pF/50V	CC45SL1H470J
C257	9L0 8900 35M	Ceramic 1000pF/50V	CK14B1H102K
C258	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C259	9LH 2400 67	Ceramic 0.047μF/16V	CK14F1C473Z
C260	254 4261 015	Electrolytic 47μF/25V	CE04W1E470M
C262	255 1076 002	Film 0.022μF/50V	CQ93M1H223K
C263	254 3016 038	Electrolytic 3.3μF/50V (BP)	CE04D1H3R3MBP
C264	255 1072 006	Film 0.01μF/50V	CQ93M1H103K
C265	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M
C281	254 4261 015	Electrolytic 47μF/25V	CE04W1E470M
C301L,301R	9L0 8900 26M	Ceramic 220pF/50V	CK14B1H221K
C302L,302R	9L0 8900 31M	Ceramic 470pF/50V	CK14B1H471K
C303L,303R	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K

Ref. No.	Part No.	Part Name	Remarks
C304L,304R	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C305L,305R	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C306	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C309L,309R	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C310L,310R	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C329	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z
C330	9LH 2400 67	Ceramic 0.047μF/16V	CK14F1C473Z
C331	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C332-335	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C336L,336R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C337,338	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C339	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M
C340	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C341	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M
C342	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C343	254 4195 055	Electrolytic 0.15μF/50V	CE04W1HR15M
C344	9LH 2528 79	Electrolytic 3.3μF/50V (LL)	CE04W1H3R3M (LL)
C345,346	255 1086 005	Film 0.15μF/50V	CQ93M1H154K
C347	9LH 2528 79	Electrolytic 3.3μF/50V (LL)	CE04W1H3R3M (LL)
C348	254 4195 055	Electrolytic 0.15μF/50V	CE04W1HR15M
C349	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C350	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M
C351	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C352	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M
C353,354	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C355	254 4261 015	Electrolytic 47μF/25V	CE04W1E470M
C356	255 1249 907	Film 470pF/50V	CQ93M1H471J
C357	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C358	9L0 8900 33M	Ceramic 680pF/50V	CK14B1H681K
C359	254 4260 058	Electrolytic 2.2μF/50V	CE04W1H2R2M
C360	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C361	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C362	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
C363	9LH 2400 67	Ceramic 0.047μF/16V	CK14F1C473Z
C364	254 4260 029	Electrolytic 0.33μF/50V	CE04W1HR33M
C365	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C366	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C367	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M
C368	255 4191 007	Film 0.082μF/50V	CQ93P1H823J
C369	9L0 8900 38M	Ceramic 3300pF/16V	CK14X 1C332M
C370	255 4191 007	Film 0.082μF/50V	CQ93P1H823J
C371	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C372L,372R	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
C373-375	254 4261 015	Electrolytic 47μF/25V	CE04W1E470M
C376	9LH 2400 68	Ceramic 0.1μF/50V	CK14F1H104Z
C377L,377R	9L0 8900 36M	Ceramic 1500pF/16V	CK14X 1C152M
C378L,378R	9L0 8900 38M	Ceramic 3300pF/16V	CK14X 1C332M
C451,452	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C453	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C455	254 4261 015	Electrolytic 47μF/25V	CE04W1E470M
C456	254 4250 039	Electrolytic 220μF/6.3V	CE04W0J221M

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
C457	254 4261 015	Electrolytic 47 $\mu$ F/25V	CE04W1E470M	PG102,103	9L2 6742 62	MX 2MM 3P pin post	
C458	9L0 8900 43M	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M	PG303A	9LE D007 78	13P FFC connector	
C460	254 4260 087	Electrolytic 10 $\mu$ F/50V	CE04W1H100M	PG605	9L2 9590 57	Pin post (PH 8P)	
C461	9LH 2464 51	Ceramic 30pF/50V	CC45SL1H300J				
C462	254 4260 045	Electrolytic 1 $\mu$ F/50V	CE04W1H010M	CN103	9LE F018 68	3P MX connector	
C463	9L0 8900 43M	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M				
C464	9L0 8900 37M	Ceramic 2200pF/16V	CK14X 1C222M	CN301	9LE F018 58	8P MX connector	
C465	254 4260 061	Electrolytic 3.3 $\mu$ F/50V	CE04W1H3R3M	CN302	9LE F018 59	9P MX C to B connector	Asia model only
C466	9L0 8900 43M	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M	CN304	9LE F014 17	8P connector TXL	
C467	254 4250 055	Electrolytic 470 $\mu$ F/6.3V	CE04W0J471M				
C468	9L0 8900 43M	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M	JK301	9LE R002 21	8P US pin jack	
C469	254 4250 039	Electrolytic 220 $\mu$ F/6.3V	CE04W0J221M	JK302	9LE R002 33	4P US pin jack	
C470	254 4260 087	Electrolytic 10 $\mu$ F/50V	CE04W1H100M	JK303	9LE P000 32	11P system connector jack	System connector 2
C471	254 4261 015	Electrolytic 47 $\mu$ F/25V	CE04W1E470M				
C472	254 4250 055	Electrolytic 470 $\mu$ F/6.3V	CE04W0J471M	P101	9LE U000 11	Antenna terminal F2P	
CT451	9L0 2814 76R	Trimer capacitor 30pF		TP1~4	9L2 6883 63W	1P pin	
<b>OTHER PARTS GROUP</b>				TP6	9L2 6883 63W	1P pin	
L302	9L2 1222 53M	Axial coil LAL04 101K		TP01,02	9L5 7152 31	1P SQ pin	
L451	9L2 1222 53M	Axial coil LAL04 101K					
CP151	9LB H000 13	RF block (MW)		N301	9L4 5372 31	Style pin	
CP201	9L2 1457 93	AM IF trans (with C.F)					
TU101	9LH H000 11	Tuner pack	Europe, U.K. models only				
TU101	9L2 4286 61	Tuner pack	Except Europe, U.K. models				
T201	9L2 1457 83	FM discriminator trans					
T202,203	9L2 1363 14	L.P.F. 19kHz	Europe, U.K. models only				
T204	9L2 1363 15	L.P.F. 114kHz (RDS)	Europe, U.K. models only				
T451	9LB J001 81	LC coil (OSD)					
CF201,202	261 0064 007	Ceramic filter CFL-SFT10.7MS2-A	Europe, U.K. models only				
CF201	261 0135 907	Ceramic filter CFL-SFE10.7MA8-A	Except Europe, U.K. models				
CF202	261 0136 906	Ceramic filter CFL-SFE10.7MS2G-A	Except Europe, U.K. models				
X251	399 0107 007	Resonator CST4.19MGW					
X302	399 0160 002	Resonator CST8.0MTW					
X451	399 0114 003	Crystal HC-49/U 17.734476MHz	Except U.S.A., Canada models				
X451	399 0121 009	Crystal HC-49/U 14,31818MHz	U.S.A., Canada models only				

# FL DISPLAY P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC401	9L2 0084 32	IC BU4052 BC	
IC402~404	9LC K041 21	IC BA14741F	
IC405	9LC K018 11	IC BU4066F	
IC406	9L2 3017 01W	IC BA6209N	
IC407	9LC K045 31	IC BU2090F	
IC481,482	263 0711 000	IC M5218AP	Asia model only
IC483	9LC P005 51	IC M65844P	Asia model only
IC601	262 1827 000	IC SAA6579T	Except Asia model
IC602	9LC K044 71	IC LC7074M	Except Asia model
IC603	9LC K044 82	IC $\mu$ PD7S044GF-218-3B9	
IC4001	9LC K041 21	IC BA14741F	Asia model only
IC4002	9LC K049 01	IC M65840FP	Asia model only
IC4004	9LC K041 21	IC BA14741F	Asia model only
IC4005	9LC K049 01	IC M65840FP	Asia model only
Q401L,401R	269 0080 904	Transistor DTA114TS	Built in resistor
Q402	269 0062 906	Transistor DTC124ES	Built in resistor
Q403~406	269 0046 003	Transistor DTA114ES	Built in resistor
Q481,482	273 0303 910	Transistor 2SC1740S(S)	Asia model only
Q601	273 0303 910	Transistor 2SC1740S(S)	
Q602	928 0028 502	Transistor DTC124ES	Built in resistor
Q603~607	273 0303 910	Transistor 2SC1740S(S)	
Q4001L, 4001R	273 0303 910	Transistor 2SC1740S(S)	Asia model only
D401L,401R	276 0375 002	Diode 1N4531 or 1N4148	
D481	276 0375 002	Diode 1N4531 or 1N4148	Asia model only
D601~603	276 0375 002	Diode 1N4531 or 1N4148	
D604	276 0375 002	Diode 1N4531 or 1N4148	Asia model only
D605	276 0375 002	Diode 1N4531 or 1N4148	Europe, U.K. models only
D606	276 0375 002	Diode 1N4531 or 1N4148	
D607	276 0375 002	Diode 1N4531 or 1N4148	Asia model only
D608	276 0375 002	Diode 1N4531 or 1N4148	
D4001	9L2 3973 14	LED RLL-20503PD-R15(S)	Asia model only
ZD401,402	9W2 3318 23	Zener diode HZ9A3	9V
ZD403	276 0457 904	Zener diode HZ4C1	4V
ZD481	276 0452 909	Zener diode HZ3A1	3V Asia model only
ZD601,602	276 0303 003	Zener diode HZ6C2	6V
<b>RESISTORS GROUP (Not included carbon film <math>\pm 5\%</math> 1/4W)</b>			
RV401	9LA Y001 51	Variable resistor 50kohm-A x 4	MAIN VR
RV402	9L0 1581 06	Variable resistor 100kohm B	Balance
RV481~483	9L0 1581 07	Variable resistor 10kohm B	Asia model only

Ref. No.	Part No.	Part Name	Remarks
<b>CAPACITORS GROUP</b>			
C401L,401R	253 1195 961	Ceramic 4700pF/16V	CK14X1C472M
C402L,402R	253 1197 901	Ceramic 0.047 $\mu$ F/16V	CK14F1C473Z
C403L,403R	253 1197 901	Ceramic 0.047 $\mu$ F/16V	CK14F1C473Z
C404L,404R	253 1195 929	Ceramic 2200pF/16V	CK14X1C222M
C405L,405R	253 1197 901	Ceramic 0.047 $\mu$ F/16V	CK14F1C473Z
C406L,407R	255 1073 005	Film 0.012 $\mu$ F/50V	CQ93M1H123K
C407C	253 1193 976	Ceramic 220pF/50V	CK14B1H221K
C407L,407R	253 1193 976	Ceramic 220pF/50V	CK14B1H221K
C407S	253 1194 933	Ceramic 680pF/50V	CK14B1H681K
C408L,408R	253 1193 934	Ceramic 100pF/50V	CK14B1H101K
C409,410	254 4256 033	Electrolytic 47 $\mu$ F/25V	CE04W1E470M
C413L,413R	253 1194 959	Ceramic 1000pF/50V	CK14B1H102K
C414L,414R	254 4260 061	Electrolytic 3.3 $\mu$ F/50V	CE04W1H3R3M
C415L,415R	254 9014 005	Electrolytic 0.1 $\mu$ F/50V	CE04W1H0R1M
C416L,416R	254 4260 045	Electrolytic 1 $\mu$ F/50V	CE04W1H010M
C417L,417R	253 1197 901	Ceramic 0.047 $\mu$ F/16V	CK14F1C473Z
C420	255 4224 945	Film 0.1 $\mu$ F/50V	CQ92M1H104J(MRZ)
C421,422	253 1193 934	Ceramic 100pF/50V	CK14B1H101K
C423	254 4256 033	Electrolytic 47 $\mu$ F/25V	CE04W1E470M
C424,425	253 1193 976	Ceramic 220pF/50V	CK14B1H221K
C426	255 4224 945	Film 0.1 $\mu$ F/50V	CQ92M1H104J(MRZ)
C427S	254 4260 045	Electrolytic 1 $\mu$ F/50V	CE04W1H010M
C481,482	253 1198 913	Ceramic 0.01 $\mu$ F/16V	CK14Y1C103M
C483,484	254 9014 005	Electrolytic 0.1 $\mu$ F/50V	Asia model only CE04W1H0R1M
C485,486	253 1193 992	Ceramic 330pF/50V	Asia model only CK14B1H331K
C487,488	254 4260 058	Electrolytic 2.2 $\mu$ F/50V	Asia model only CE04W1H2R2M
C489	253 1193 992	Ceramic 330pF/50V	Asia model only CK14B1H331K
C490	253 1194 959	Ceramic 1000pF/50V	Asia model only CK14B1H102K
C491	254 4260 045	Electrolytic 1 $\mu$ F/50V	Asia model only CE04W1H010M
C493	254 4256 033	Electrolytic 47 $\mu$ F/25V	Asia model only CE04W1E470M
C494	253 1198 913	Ceramic 0.01 $\mu$ F/16V	Asia model only CK14Y1C103M
C495,496	HMA1000 158	Ceramic 56pF/50V	Asia model only CK14SL1H560J
C601,602	9L0 8900 14M	Ceramic 27pF/50V	CK14SL1H270J Except Asia model
C603	254 4260 087	Electrolytic 10 $\mu$ F/50V	CE04W1H100M Except Asia model
C604	254 4260 058	Electrolytic 2.2 $\mu$ F/50V	CE04W1H2R2M Except Asia model

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
C606	HMA 1000 163	Ceramic 560pF/50V	CK14B1H561K Except Asia model	C4003L, 4003R	253 1193 976	Ceramic 220pF/50V	CK14B1H221K Asia model only
C607	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Except Asia model	C4004L, 4004R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M Asia model only
C608	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M Except Asia model	C4005L, 4005R	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only
C609	254 4256 046	Electrolytic 100μF/25V	CE04W1E101M	C4006L, 4006R	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only
C610	254 9014 005	Electrolytic 0.1μF/50V	CE04W1H0R1M	C4007L, 4007R	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only
C611	253 1197 901	Ceramic 0.047μF/16V	CK14F1C473Z	C4008L, 4008R	255 4199 038	Film 0.068μF/50V	CQ92M1H683K Asia model only
C613	259 0002 008	Backup cap. 0.047μF/5.5v	EECF5R5U473	C4009L, 4009R	255 4199 038	Film 0.068μF/50V	CQ92M1H683K Asia model only
C614	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M	C4010L, 4010R	255 4199 038	Film 0.068μF/50V	CQ92M1H683K Asia model only
C615,616	254 4250 026	Electrolytic 100μF/6.3V	CE04W0J101M	C4011L, 4011R	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M Asia model only
C617	9L0 8900 44M	Ceramic 0.022μF/50V	CK14F1H223Z	C4012L, 4012R	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only
C618	HMA1000 158	Ceramic 56pF/50V	CK14SL1H560J	C4013L, 4013R	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M Asia model only
C619	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M	C4014L, 4014R	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only
C620	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	C4015L, 4015R	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only
C623~625	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z	C4016L, 4016R	253 1195 961	Ceramic 4700pF/16V	CK14X1C472M Asia model only
C626	254 4260 016	Electrolytic 0.22μF/50V	CE04W1HR22M	C4017L, 4017R	253 1194 917	Ceramic 470pF/50V	CK14B1H471K Asia model only
C630,631	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M	C4018L, 4018R	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only
C3001	254 4260 061	Electrolytic 3.3μF/50V	CE04W1H3R3M Asia model only	C4019L, 4019R	253 1194 917	Ceramic 470pF/50V	CK14B1H471K Asia model only
C3002	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only	C4020L, 4020R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M Asia model only
C3003	255 1137 006	Film 0.15μF/50V	CQ92M1H154J Asia model only	C4021L, 4021R	HMA 1000 157	Ceramic 47pF/50V	CC45SL1H470J Asia model only
C3004	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M Asia model only	C4022L, 4022R	HMA 1000 157	Ceramic 47pF/50V	CC45SL1H470J Asia model only
C3005	253 1195 929	Ceramic 2200pF/16V	CK14X1C222M Asia model only	C4023L, 4023R	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M Asia model only
C3006	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only	C4024L, 4024R	253 1195 903	Ceramic 1500pF/16V	CK14X1C152M Asia model only
C3007,3008	255 4212 009	Film 0.22μF/50V	CQ92M1H224J(MRZ) Asia model only	C4025, 4026	9L0 8900 08M	Ceramic 10pF/50V	CK14SL1H100J Asia model only
C3009	253 1195 929	Ceramic 2200pF/16V	CK14X1C222M Asia model only	C4027L, 4027R	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only
C3010	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only	C4028L, 4028R	HMA 1000 157	Ceramic 47pF/50V	CC45SL1H470J Asia model only
C3011	253 1198 913	Ceramic 0.01μF/16V	CK14Y1C103M Asia model only	C4029L, 4029R	HMA 1000 157	Ceramic 47pF/50V	CC45SL1H470J Asia model only
C3012	254 4261 015	Electrolytic 47μF/50V	CE04W1H470M Asia model only				
C3013	253 1193 934	Ceramic 100pF/50V	CK14B1H101K Asia model only				
C3014	253 1197 914	Ceramic 0.1μF/50V	CK14F1H104Z Asia model only				
C4001L, 4001R	255 4224 945	Film 0.1μF/50V	CQ92M1H104J(MRZ) Asia model only				
C4002L, 4002R	253 1195 929	Ceramic 2200pF/16V	CK14X1C222M Asia model only				

MAIN P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks
C4030L, 4030R	HMA 1000 157	Ceramic 47pF/50V	CC45SL1H470J Asia model only
<b>OTHER PARTS GROUP</b>			
S601~613	9L2 6396 82R	Tact switch	Asia model only
S614~617	9L2 6396 82R	Tact switch	
S618~624	9L2 6396 82R	Tact switch	
S625~627	9L2 6396 82R	Tact switch	Except Asia model
S628	9L2 6396 82R	Tact switch	
X601	9L2 1701 33F	Crystal AT-49 4.332MHz(S)	Except Asia model
X602	399 9018 003	Crystal 4.0MHz	Except Asia model
X603	399 0107 007	Resonator CST419MGW	
X4001	9LB P004 51	Resonator CSA16.00MXZ040	Asia model only
FL601	9LD D000 31	FL display	
PG302	9L2 6742 68	9P MX pin post	Asia model only
PG303F	9LE D008 08	13P FFC connector	
PG304	9L2 6586 77W	TXL 8P pin post	
PG604	9LE D009 13	7P B to B connector	Asia model only
PG606	9L2 6742 64	MX pin post	
PG4002	9L2 6742 66	7P MX pin post	Asia model only
CN402	9L2 7115 02	2P TXL connector	
CN403	9L2 9092 86	10P PH C to B connector	
CN601	9LE F018 79	7P MX C to B connector	
CN602	9LE F031 88	2P MX 2MM connector	
CN603	9LE F018 56	5P MX C to B connector	
CN604	9L2 6982 73	7P B to B connector	
CN605	9LE F042 51	8P PH connector	Except Asia model
CN605	9L2 9092 31	8P PH C to B connector	Asia model only
CN606	9LE F018 69	5P MX 2MM connector	Asia model only
CN4002	9L2 9765 49	7P MX 2MM connector	Asia model only
JK481,482	9LE R002 51	Mic jack	Asia model only
JK601	9L2 6950 32	Headphone jack	
IR801	9LH N000 31	Receiving unit SBX1910-52	
E601	9LN J016 41	FL holder	
P001	9L2 6883 63W	1P pin	

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC001	9LC P024 12	IC KIA7806PI	
IC002	9LC P024 14	IC KIA7809PI	
IC003	9LC P024 16	IC KIA7812PI	
IC501	9LC W001 21	IC STK-400-060	
IC551L,551R	263 0985 001	IC SI18751	
IC581	9L2 3875 82	IC $\mu$ PC1237HA	
PR001,002	268 0072 906	IC protector ICP-N10	
PR003,004	LA2 500U 216	IC protector ICP-N5	
Q004	9W2 3260 21	Transistor 2SC1741(QR)	Built in resistor
Q005	9L2 3280 83T	Transistor 2SA844E	
Q006	269 0062 906	Transistor DTC124ES	
Q007,008	273 0303 910	Transistor 2SC1740S(S)	
Q009	9L2 3286 25	Transistor 2SB647C	
Q010	9L2 3280 83T	Transistor 2SA844E	
Q501L,501R	9W2 3179 71	Transistor 2SD1468R	
Q502	DB8 00-0 139	Transistor 2SC2235Y	
Q581	9L2 3280 83T	Transistor 2SA844E	Built in resistor
Q582	9L2 3286 25	Transistor 2SB647C	
Q583,584	9W2 3260 21	Transistor 2SC1741(QR)	
Q585	269 0046 003	Transistor DTA114ES	
D001~008	916 0053 008	Diode 1N4002	
D009	276 0338 007	Diode S4VB20-4001L20	
D010	276 0547 005	Diode S5V20-200	
D014,015	276 0375 002	Diode 1N4531 or 1N4148	
D016,017	916 0053 008	Diode 1N4002	
D018,019	276 0375 002	Diode 1N4531 or 1N4148	
D022,023	276 0375 002	Diode 1N4531 or 1N4148	
D501~504	276 0375 002	Diode 1N4531 or 1N4148	
D551,552	276 0375 002	Diode 1N4531 or 1N4148	
D581	276 0375 002	Diode 1N4531 or 1N4148	
D582	916 0053 008	Diode 1N4002	
ZD001,002	276 0173 068	Zener diode HZ6B3	6V
ZD003	276 0255 025	Zener diode HZ12B2	12V
ZD004	276 0220 021	Zener diode HZ24-2L	24V
ZD005,006	276 0051 038	Zener diode HZ7B2	7V
<b>RESISTORS GROUP (Not included carbon film <math>\pm 5\%</math> 1/4W)</b>			
R001	9LH 1390 05	Carbon compo. 2.7Mohm 1/2W	RC05GF2H275J U.S.A. and Canada models
R002~004	241 0185 005	Carbon film 1kohm 1/2W	RD14B2H102J
R015	244 0091 020	Metal oxide 270ohm 2W	RS14B3D271JNBF
R024	241 0197 006	Carbon film 3.3kohm 1/2W	RD14B2H332J

Ref. No.	Part No.	Part Name	Remarks
△ R509-511	9L1 1106 21	Fuse resistor 100ohm 1/4W	RD14B4E101JFR
△ R514	9L1 1106 21	Fuse resistor 100ohm 1/4W	RD14B4E101JFR
R521L,521R	241 0137 008	Carbon film 10ohm 1/2W	RD14B2H100J
R522L,522R	241 0137 008	Carbon film 10ohm 1/2W	RD14B2H100J
R523,524	241 0137 008	Carbon film 10ohm 1/2W	RD14B2H100J
R525L,525R	244 0080 002	Metal oxide 330ohm 2W	RS14B3D331JNBF
R557L,557R	241 0137 008	Carbon film 10ohm 1/2W	RD14B2H100J
R558L,558R	241 0137 008	Carbon film 10ohm 1/2W	RD14B2H100J
R586,587	244 0082 000	Metal oxide 470ohm 2W	RS14B3D471JNBF
R590	244 0082 000	Metal oxide 470ohm 2W	RS14B3D471JNBF
R594	244 0101 020	Metal oxide 1.8kohm 2W	RS14B3D182JNBF

## CAPACITORS GROUP

△ C001,002	9LA J002 73	Ceramic 0.0047μF/400V	CK45F2GAC472M Europe, U.K., Asia models
△ C001,002	9LA J002 74	Ceramic 0.01μF/400V	CK45F2GAC103M U.S.A., Canada models
C003,004	9LA L003 21	Electrolytic 5600μF/50V	CE04==1H562M SMH
C005,006	254 4256 091	Electrolytic 2200μF/50V	CE04W1H222M
C007	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C008	254 4256 088	Electrolytic 1000μF/25V	CE04W1E102M
C009,010	254 4256 059	Electrolytic 220μF/25V	CE04W1E221M
C011	254 4256 091	Electrolytic 2200μF/50V	CE04W1H222M
C012	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C013,014	9L0 2445 71F	Ceramic 0.01μF/500V	CK45F2H103Z
C015,016	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C017-020	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C021,022	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C023	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M
C024	254 4261 028	Electrolytic 100μF/50V	CE04W1H101M
C025	254 4261 073	Electrolytic 220μF/50V	CE04W1H221M
C026	254 4261 015	Electrolytic 47μF/50V	CE04W1H470M
C027	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C030	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C032	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M
C033,034	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C035	9LH 2400 67	Ceramic 0.047μF/50V	CK14F1H473Z
C501L,501R	9L0 8900 31M	Ceramic 470pF/50V	CK14B1H471K
C502	9L0 8900 31M	Ceramic 470pF/50V	CK14B1H471K
C503L,503R	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
C504	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M
C505	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C506L,506R	9L0 8900 22M	Ceramic 100pF/50V	CK14B1H101K
C507	254 4256 056	Electrolytic 100μF/25V	CE04W1E101M
C508L,508R	254 4256 056	Electrolytic 100μF/25V	CE04W1E101M
C509-514	254 4261 028	Electrolytic 100μF/50V	CE04W1H101M
C515L,515R	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C516L,516R	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C517,518	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C520L,520R	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M

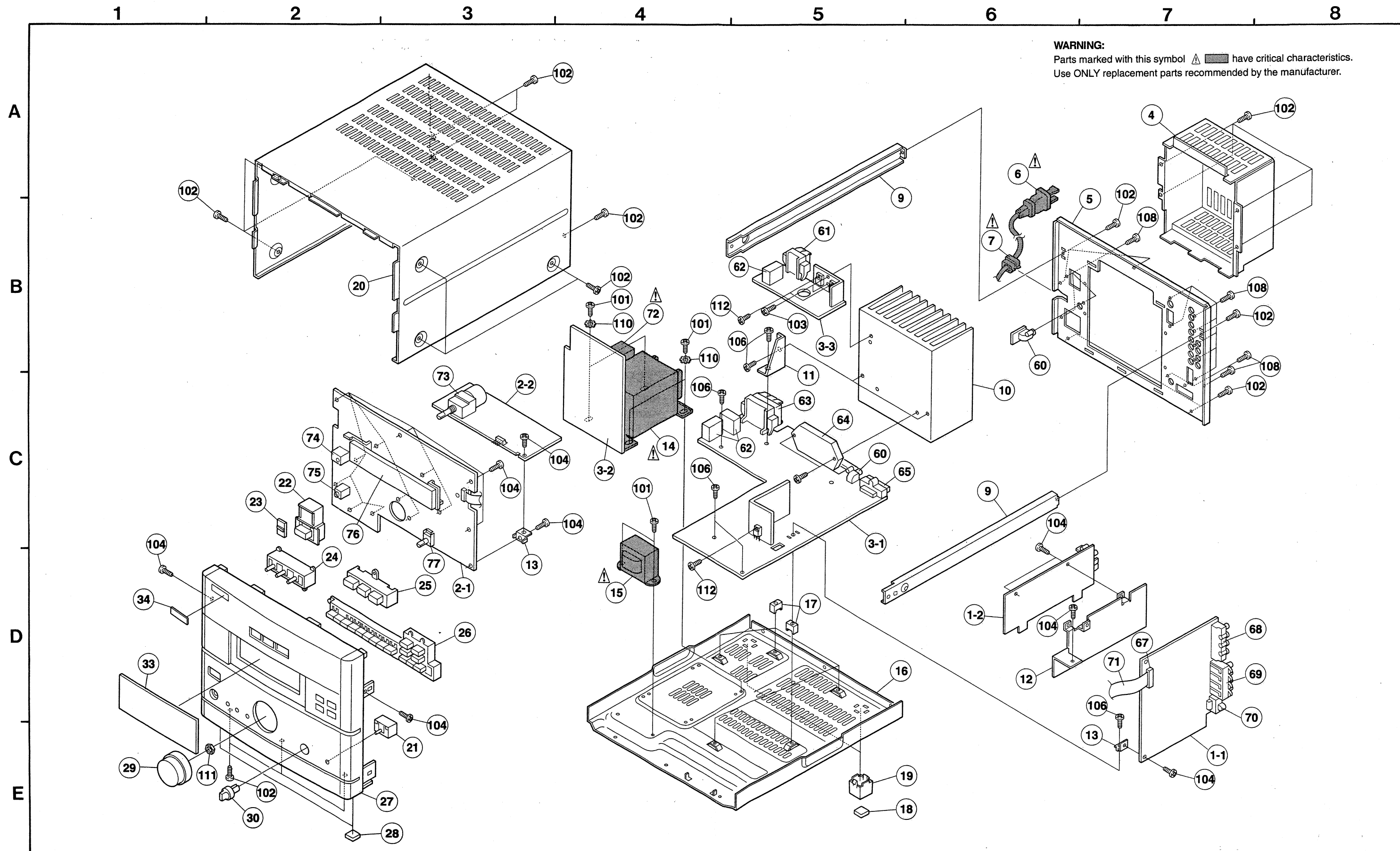
Ref. No.	Part No.	Part Name	Remarks
C519L,519R	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C521	253 1024 003	Ceramic 0.01μF/50V	CK45F1H103Z
C522	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C523	254 4261 028	Electrolytic 100μF/50V	CE04W1H101M
C524	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C525	255 1122 024	Film 0.068μF/50V	CQ93M1H683J
C551	9L0 8900 31M	Ceramic 470pF/50V	CK14B1H471K
C552L,552R	254 4260 058	Electrolytic 2.2μF/50V	CE04W1H2R2M
C554L,554R	254 4256 056	Electrolytic 100μF/25V	CE04W1E101M
C555,556	254 4260 087	Electrolytic 10μF/50V	CE04W1H100M
C557L,557R	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C558L,558R	255 1084 007	Film 0.1μF/50V	CQ93M1H104K
C559L,559R	9LH 2400 68	Ceramic 0.1μF/50V	CK14F1H104Z
C560,561	9L0 8900 43M	Ceramic 0.01μF/16V	CK14Y1C103M
C581	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C582	254 4258 031	Electrolytic 33μF/35V	CE04W1V330M
C583	255 1121 067	Film 0.022μF/50V	CQ93M1H223J
C584	254 4256 056	Electrolytic 100μF/25V	CE04W1E101M

## OTHER PARTS GROUP

△ F001	9L2 7280 76	Fuse T2A	Europe, U.K., models
△ F001	9L2 7277 28	Fuse T3.15A	Asia model
△ F001	9L2 7224 17	Fuse 4A 125V	U.S.A., Canada models
△ F002	9L2 7280 76	Fuse T2A	Asia model
△ F003	9L2 7280 72	Fuse T630mA	Europe, U.K., Asia models
△ F003	9L2 7224 66	Fuse 500mA 250V	U.S.A., Canada models
△ F004	9L2 7280 77	Fuse T1A	Europe, U.K., Asia models
△ F004	9L2 7224 13	Fuse 1.6A 125V	U.S.A., Canada models
△ F005,006	9L2 7277 22	Fuse T2.5A	Europe, U.K., Asia models
△ F005,006	9L2 7224 16	Fuse 3A 250V	U.S.A., Canada models
E001,002	9L2 7292 52R	Fuse holder	Asia model only
E003,004	9L2 7292 52R	Fuse holder	
E005-012	9L2 7292 52R	Fuse holder	
JK001	9LE D004 91	15P socket	
JK002,003	9LE R002 41	1P US pin jack	
JK502	9LE U003 61	6P SP terminal	
JK551	9LE U000 86	4P SP terminal	
CN001	9LE F018 77	2P MX connector	
CN102	9LE F018 78	3P MX connector	
CN501	9L2 9090 44	2P PH connector	
CN551	9L2 9091 33	5P PH connector L=100	
△ S001,002	9LF G000 11	Voltage selector switch	Asia model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
L501L,501R	9L2 2273 61	Audio trap coil	Europe, U.K. models	
L502	9L2 2273 61	Audio trap coil	Europe, U.K. models	
L551L,551R	9L2 2273 61	Audio trap coil	Europe, U.K. models	
△ RY001	9L2 6405 76	Relay SDT-SS-112DM		
RY501,502	9L2 6413 41	Relay		
RY551	9L2 6413 41	Relay		
PG001	9L2 6742 61	MX 2MM 2P pin post		
PG002	9L2 6688 12W	3P VH pin post		
PG003	9L2 6688 11W	2P VH pin post		
PG301	9L2 6742 67	MX mini pin post(53253-0810)		
PG402	9L2 6586 71W	TXL 2P pin post		
PG551	9L2 9590 54	PH plug (5P)		
PG601	9L2 6742 66	7P MX pin post		
PG602	9L2 6742 61	MX 2MM 2P pin post		
PG603	9L2 6742 64	MX pin post		
J001	9L2 6888 59	Jumper pin		
P001,002	9L2 6894 01	Power blank terminal		
	9L8 6714 08	3x8 DT screw		
	9L8 6914 08	Screw BH BT 3x8		
	9L8 6914 14	3x14 BT screw		7 5 4

## EXPLODED VIEW OF AMP UNIT (For Europe, U.K., U.S.A. and Canada Models)



# PARTS LIST OF EXPLODED VIEW OF AMP UNIT UDRA-1250 SECTION

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9LJ T048 61	Audio unit Ass'y	U.S.A., Canada models	1s	23	9LN X012 01	RE filter		1
	9LJ T048 62	Audio unit Ass'y	Europe model	1s	24	9LP C017 02	Button (S)		1
	9LJ T048 63	Audio unit Ass'y	U.K. model	1s	25	9LP C015 13	Button (F/D)	Asia model	1
	9LJ T048 66	Audio unit Ass'y	Asia model	1s		9LP C015 12	Button (F/D)	Except Asia model	1
2	9LJ T048 91	FL display unit Ass'y	U.S.A., Canada models	1s	26	9LP C015 21	Button (TU)	Except Asia model	1
	9LJ T048 92	FL display unit Ass'y	Europe model	1s		9LP C015 22	Button (TU)	Asia model	1
	9LJ T048 93	FL display unit Ass'y	U.K. model	1s	27	9LP H032 43	Front panel (TA)	Asia model	1
	9LJ T048 96	FL display unit Ass'y	Asia model	1s		9LP H039 51	Front panel (TA)	U.S.A., Canada models	1
3	9LJ T049 61	Main unit Ass'y	U.S.A., Canada models	1s		9LP H039 52	Front panel (TA)	Europe, U.K. models	1
	9LJ T049 62	Main unit Ass'y	Europe model	1s	28	9L8 4116 42	Felt		2
	9LJ T049 63	Main unit Ass'y	U.K. model	1s	29	9LP C016 91	VOL knob Ass'y	Asia model	1
	9LJ T049 66	Main unit Ass'y	Asia model	1s		9LP C016 93	VOL knob Ass'y	Except Asia model	1
4	9LQ A003 22	Heat sink cover		1	30	9LP C015 71	Balance knob	Asia model	1
5	9LN V000 81	Rear plate (E3)	U.S.A., Canada models	1		9LP C015 72	Balance knob	Except Asia model	1
	9LN V000 82	Rear plate (E2/EK)	Europe, U.K. models	1	31				
	9LN V000 84	Rear plate (E1/EA)	Asia model	1	32	9LP C015 41	Button (K)	Asia model	1
△ 6	9L2 7131 47	AC cord	U.S.A., Canada models	1	33	9LP H032 51	Clear panel		1
△	9L2 9725 67	AC cord	Except U.S.A., Canada models	1	34	9LP U001 51	DENON badge		1
△ 7	9LM L000 61	AC cord bushing	Except U.S.A., Canada models	1	★ 40	9LN A094 11	Bottom support		1
△	9L3 8722 71	AC cord bushing	U.S.A., Canada models	1	★ 41	9LN A094 21	Chasis holder		1
△ ★ 8	9LE P 000 62	E.C. plug	ECP01 (U.K. model)	1	51	9LP C015 81	Echo knob	Asia model	1
9	9LN A071 41	Support plate		2	52	9LP C015 91	Mic knob (L)	Asia model	1
10	9LM 8000 91	Heat sink		1	53	9LP C016 01	Mic knob (R)	Asia model	1
11	9LN A094 31	Heat sink bracket (N)		2	★ 54	9LG Y001 91	Ferrite core HF57RH	Europe, U.K. models	1
12	9LN A071 51	TU bracket		1	60	9LE R002 41	1P US pin jack	JK002,003	2
13	9LN A026 71	P.W.B. bracket S		2	61	9LE U000 86	4P SP terminal	JK551	1
△ 14	9LB T004 81	Power Transformer	PT002 U.S.A., Canada models	1	62	9L2 6413 41	Relay	RY501,502,551	3
△	9LB T004 82	Power Transformer	PT002 Europe, U.K. models	1	63	9LE U003 61	6P SP terminal	JK502	1
△	9LB T004 83	Power Transformer	PT002 Asia models	1	64	9LC W001 21	IC STK-400-060	IC501	1
△ 15	9LB T004 71	Sub power Transformer	PT001	1	65	9LE D004 91	15P socket	JK001	1
16	9LN Q014 92	Bottom chassis (AT)		1	66	9LE U000 11	Antenna terminal F2P	P101	1
17	9L3 8029 74	P.W.B. holder B		7	67	9LE D007 78	13P FFC connector	PG303A	1
18	9LM Q000 34	Leg		2	68	9LE R002 33	4P US pin jack	JK302	1
19	9LN X003 31	Foot		2	69	9LE R002 21	8P US pin jack	JK301	1
20	9LQ A003 11	Top cover		1	70	9LE P000 32	11P AB connector jack	JK303	1
21	9LP C015 32	Button (D)	Asia model	1	71	9LE K002 32	13P FFC wire	W303	1
	9LP C015 34	Button (D)	Except Asia model	1	△ 72	9L2 6405 76	Relay SDT-SS-112DM	RY001	1
22	9LP C015 31	Button (P)	Asia model	1	73	9LA Y001 51	Variable resistor 50kohm-A x 4	RV401	1
	9LP C015 33	Button (P)	Except Asia model	1	74	9LH N000 31	Receiving unit SBX1910-52	IR801	1
					75	9L2 6950 32	Headphone jack	JK601	1
					76	9LD D000 31	FL display	FL601	1
					77	9L0 1581 06	Variable resistor 100kohm B	RV402	1

# ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
<b>LABELS</b>				
★ 80	9LQ N013 61	Rating label (E1)	Asia model	1
★	9LQ N013 63	Rating label (E3)	U.S.A., Canada models	1
★ 82	9LQ T008 81	Preset label	Asia model	1
★ 83	9L4 9303 12	Number sheet		1
<b>SCREWS</b>				
101	9L8 6716 06	Screw 4x6 DT bind		6
102	9L8 6794 06	Screw 3x6 DT bind B		29
103	9L8 6914 08	Screw 3x8 BH BT		3
104	9L8 6914 10	Screw 3x10 BH BT		23
105	9L8 6914 10	Screw 3x10 BH BT	Asia model	5
106	9L8 6914 14	Screw 3x14 BT		8
107	9L8 6993 08	Screw 2.6x8 BT bind B	Asia model	4
108	9L8 6994 10	Screw 3x10 BH BT BBC		12
109	9L8 6714 06	Screw 3x6 DT		1
110	9L8 8151 16	Rock washer		4
111	930 0854 009	Nut M9-11		1
112	9L8 6714 01	Screw 3x8 DT		3

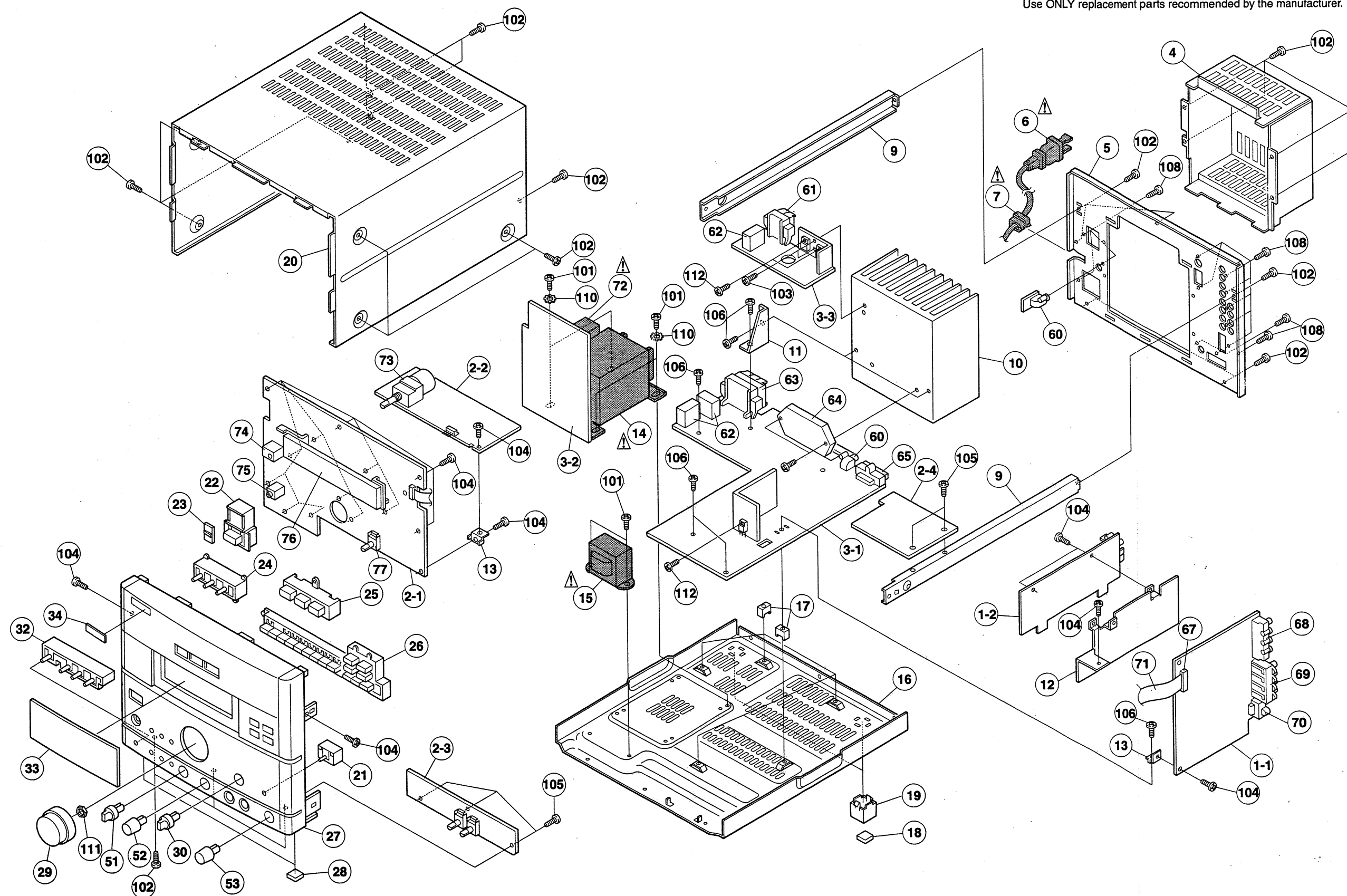
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9LE F021 31	FM antenna connector	Except Europe model	1
2	9LE Y002 81	EDISON plug adapter	Asia model	1
3	9LQ R065 01	Instruction manual E3	U.S.A., Canada models	1
3	9LQ R065 02	Instruction manual E2	Europe model	1
3	9LQ R065 03	Instruction manual EK	U.K. model	1
3	9LQ R065 04	Instruction manual E1	Asia model	1
4	9L2 7132 21	US pin cord 1P		1
5	9L2 7593 41	AM loop antenna		1
6	9L3 6402 13W	Poly cover	U.K. model	1
7	9L3 6402 14W	Poly cover 250x300	Except U.K. model	1

# PACKING

Ref. No.	Part No.	Part Name	Remarks	Q'ty
20	9LS P033 71	Cushion R		2
21	9LS P033 81	Cushion L		2
22	9LS U010 16	Poly cover	U.K. model	1
23	9LS U010 17	Poly cover	Except U.K. model	1
24	9L3 6275 65	Poly cover		1
25	9LH L004 81	Remote control unit		1
26	9LS G046 81	Carton case E3/EA	U.S.A., Canada models	1
26	9LS G046 82	Carton case E2/EK	Europe, U.K. models	1
26	9LS G046 83	Carton case E1	Asia model	1

## EXPLODED VIEW OF AMP UNIT (For Asia Model)

**WARNING:**  
Parts marked with this symbol  have critical characteristics.  
Use ONLY replacement parts recommended by the manufacturer.



A

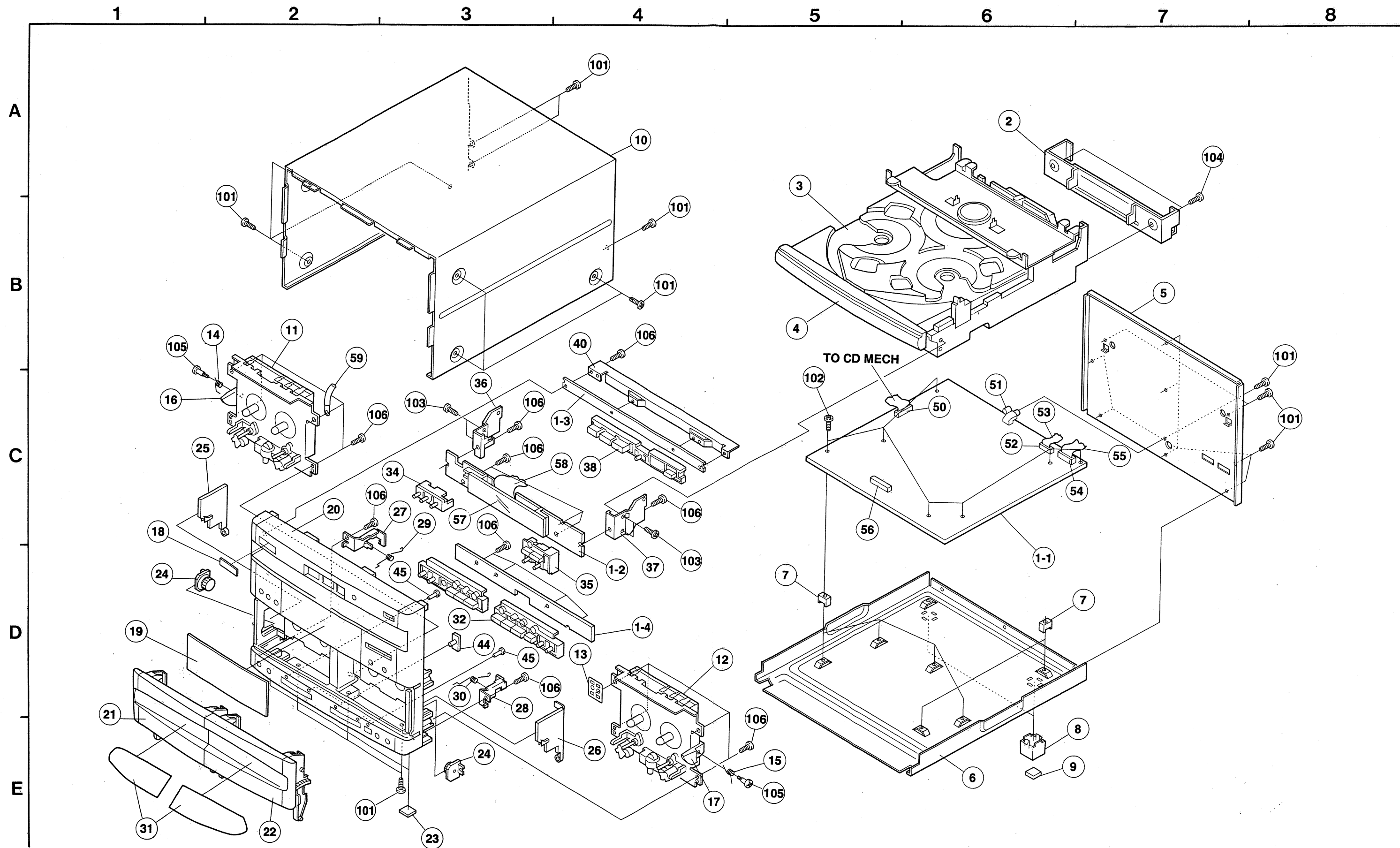
B

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D

E

## EXPLODED VIEW OF CD &amp; CASSETTE DECK UNIT



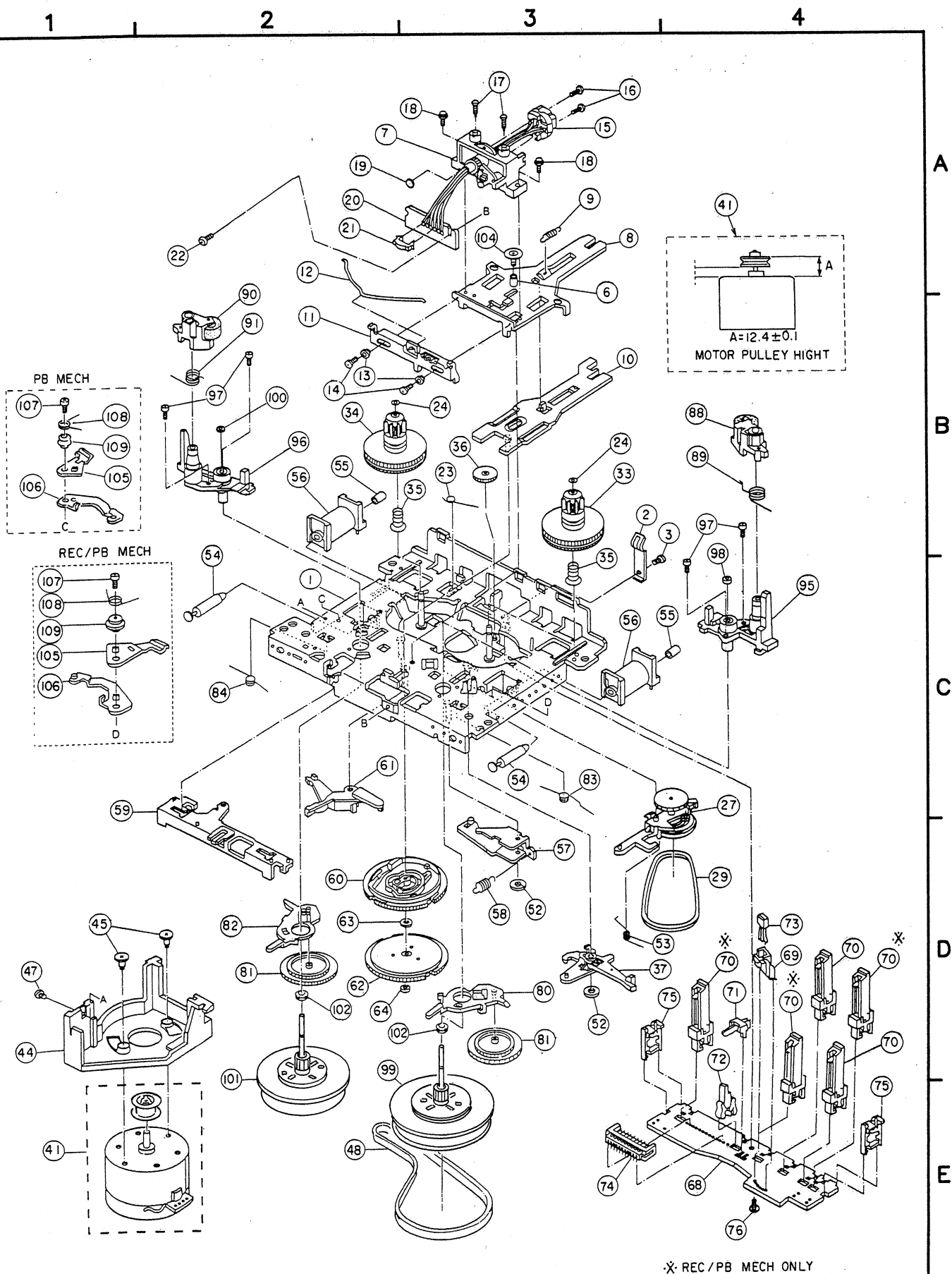
# PARTS LIST OF EXPLODED VIEW OF CD & CASSETTE DECK UNIT UCMW-1250 SECTION

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9LJ T049 31	CDC unit Ass'y	U.S.A., Canada models	1s	32	9LP C016 52	Deck button	Except Asia model	1
	9LJ T049 32	CDC unit Ass'y	Europe model	1s	33				
	9LJ T049 33	CDC unit Ass'y	U.K. model	1s	34	9LP C016 41	Dolby button	Asia model	1
	9LJ T049 36	CDC unit Ass'y	Asia model	1s		9LP C016 42	Dolby button	Except Asia model	1
2	9LN V000 71	CD holder		1	35	9LP C016 31	CD button	Asia model	1
3	9LU C002 31	MGC-310 mecha		1		9LP C016 32	CD button	Except Asia model	1
4	9LP H033 01	CD tray panel	Asia model	1	36	9LN A070 81	M bracket L		1
	9LP H033 02	CD tray panel	Except Asia model	1	37	9LN A070 91	M bracket R		1
5	9LN V000 61	Rear plate		1	38	9LP C016 21	Disc button	Asia model	1
6	9LN Q014 61	Bottom shassis		1		9LP C016 22	Disc button	Except Asia model	1
7	9L3 8029 74	P.W.B. holder B		7	39				
8	9LN X003 31	Foot		2	40	9LN A071 01	Bracket D		1
9	9LM Q000 34	LEG		2	44	9LP C016 61	LED indicator 1		2
10	9LQ A003 12	Top cover		1	45	9LP C016 71	LED indicator 2		3
11	9LU C002 41	TN-1800ZU mecha (P)		1	50	9LE D008 91	16P FFC connector	PG801	1
12	9LU C002 51	TN-1800ZU mecha (R/P)		1	51	9LE R002 41	1P US pin jack	JK901	1
13	9LN A083 81	Bracket M		1	52	9L2 6746 09	11P wire trap	PG709	1
14	9L3 3356 52	Cam spring L		1	53	9LE W007 23	11P FG cable	CN709	1
15	9L3 3356 51	Cam spring		1	54	9LE D004 84	PLGJ 52004-1510	PG710	1
16	9LN J016 71	Eject cam L		1	55	9LE W001 62	15P FG cable	CN710	1
17	9L3 8609 43	Eject cam		1	56	9L2 6989 81	30P FFC connector	PG904	1
18	9LP U001 51	DENON badge		1	57	9LD D000 21	FL tube 11-BT-148GK	FL901	1
19	9LP H032 52	Clear panel		1	58	9LE K002 31	30P FFC cable	W901	1
20	9LP H032 62	Front panel (CD)	Asia model	1	59	445 0097 009	Wire clasper		1
	9LP H032 65	Front panel (CD)	U.S.A., Canada models	1	★ 70	9LE F031 81	3P MX connector	CN701	1
	9LP H032 66	Front panel (CD)	Europe, U.K. models	1	★ 71	9LE F031 83	6P MX connector	CN702	1
21	9LP H032 71	Cassette door L	Asia model	1	★ 72	9LE F031 82	2P MX connector	CN703	1
	9LP H032 73	Cassette door L	Europe, U.K. models	1	★ 73	9L2 7119 36	4P TXL connector	CN704	1
	9LP H032 74	Cassette door L	U.S.A., Canada models	1	★ 74	9L2 9089 01	11P PH connector	CN705	1
22	9LP H032 81	Cassette door R	Asia model	1	★ 75	9L2 9765 44	4P MX connector	CN706	1
	9LP H032 85	Cassette door R	Europe, U.K. models	1	★ 76	9L2 9089 28	12P PH connector	CN707	1
	9LP H032 87	Cassette door R	U.S.A., Canada models	1	<b>LABELS</b>				
23	9L8 4116 42	Felt		2	★ 80	9L4 9303 12	Number sheet		1
24	9LK F003 71	Gear damper N		2	★ 81	9LQ K000 51	Manufactured label	U.S.A., Canada models	1
25	9LN J016 51	Side cover L		1	<b>SCREWS</b>				
26	9LN J016 61	Side cover R		1	101	9L8 6794 06	Screw 3x6 DT B		18
27	9LN A071 11	EJ bracket L		1	102	9L8 6914 14	Screw 3x14 BT		7
28	9LN A071 21	EJ bracket R		1	103	9L8 6994 08	Screw 3x8 BT BH BBC		4
29	9L3 3357 82	Eject spring L		1	104	9L8 6994 10	Screw 3x10 BT BH BBC		3
30	9L3 3357 81	Eject spring R		1	105	9L4 5318 81	Screw 2x3		2
31	9LP H032 92	Cassette clear		2	106	9L8 6914 10	Screw 3x10 BT BH		23
32	9LP C016 51	Deck button	Asia model	1					

## PARTS LIST OF EXPLODED VIEW OF CASSETTE DECK MECHANISM UNIT

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9H0 5000 420	Chassis Ass'y		1	58	9D1 8802 111	P kick lever spring		1
2	9D1 8801 002	Pack spring		1	59	9D1 8882 101	CH slider lever		1
3	9H0 5000 421	Screw 2x3 C TAPP		1	60	9D1 8882 102	M gear		1
4					61	9D1 8882 103	M trigger arm		1
5					62	9D1 8882 110	RF cam gear		1
6	9D1 8880 216	Panel collar		1	63	9H0 5000 394	E ring S2.0		1
7	9H0 5000 502	Head base Ass'y		1	64	9H0 5000 433	HLW cut 1.55x3.5x0.5		1
8	9D1 8880 202	Head panel A		1	65				
9	9D1 8800 204	RC spring		1	66				
10	9H0 5000 423	Head panel B Ass'y		1	67				
11	9D1 8800 206	CHP lever		1	68	9D1 8885 306	P base		1
12	9D1 8880 405	Pinch roller spring		1	69	9D1 8885 303	IC protector		1
13	9D1 8650 228	CHP lever collar		2	70	9H0 5000 434	Leaf SW MTS10431MVJ0		5
14	9H0 5000 424	Camera screw 1.7x3		2	71	9H0 5000 435	Leaf SW MSW18211MVD0		1
15	9D6 2020 606	Head YK56R-BA405	REC/PB	1	72	9H0 5000 436	Leaf SW MCV00511MVD0		1
15	9D6 2020 713	Head YK50P-BA405	PB	1	73	9D6 8040 603	Hall IC LB9051A		1
16	9H0 5000 425	Head collar screw S		2	74	9D6 8020 254	Connector S12B-PH	REC/PB	1
17	9H0 5000 426	Screw 2x6 SMALL		2	74	9D6 8020 253	Connector S11B-PH	PB	1
18	9H0 5000 385	Screw 2x5 TAMS		2	75	9D1 8885 304	P base stud		2
19	9D1 8650 961	Spacer		1	76	9H0 5000 437	Screw 2x4 C TAPP		1
20	9D1 8650 234	Relay board	PB	1	77				
20	9D1 8650 266	Relay board	REC/PB	1	78				
21	9D1 8650 249	Wire clamp		1	79				
22	9H0 5000 384	Screw 2x5 S TAMS		1	80	9H0 5000 438	T gear arm F Ass'y		1
23	9D1 8880 204	Head panel spring		1	81	9D1 8880 507	T gear		2
24	9H0 5000 503	HLW cut 1.4x3.1x0.5		2	82	9H0 5000 439	T gear arm R Ass'y		1
25					83	9D1 8880 513	TG arm F spring		1
26					84	9D1 8880 514	TG arm R spring		1
27	9H0 5000 428	RF clutch Ass'y		1	85				
28					86				
29	9D1 8880 707	RF belt		1	87				
30					88	9H0 5000 505	Pinch roller F Ass'y		1
31					89	9D1 8800 403	P arm F spring		1
32					90	9H0 5000 506	Pinch roller R Ass'y		1
33	9H0 5000 429	T reel Ass'y F		1	91	9D1 8800 404	P arm R spring		1
34	9H0 5000 430	T reel Ass'y R		1	92				
35	9D1 8880 515	B.T spring		2	93				
36	9D1 8880 508	FF gear		1	94				
37	9D1 8880 509	RF trigger arm		1	95	9H0 5000 442	FL metal F Ass'y		1
38					96	9H0 5000 443	FL metal R Ass'y		1
39					97	9H0 5000 431	Screw 2x5 C TAP		4
40					98	9H0 5000 444	HLW cut 1.8x4x0.5		1
41	9H0 5000 504	Motor Ass'y		1	99	9H0 5000 507	Flywheel F Ass'y		1
42					100	9H0 5000 446	HLW cut 1.7x3.5x0.5		1
43					101	9H0 5000 508	Flywheel R Ass'y		1
44	9D1 8881 202	Motor bracket		1	102	9H0 5000 509	HLW cut 2.3x3.8x0.13		2
45	9D1 9211 202	Motor collar screw		2	103				
46					104	9H0 5000 459	Screw 2x5 TAPP		1
47	9H0 5000 431	Screw 2x5 C TAP		1	105	9D1 8801 301	E stopper A(F)	REC/PB	1
48	9D1 8880 936	M belt		1	105	9D1 8801 306	E stopper A(F)	PB	1
49					106	9D1 8881 303	E stopper B(R)	PB	1
50					106	9D1 8881 302	E stopper B(R)	REC/PB	1
51					107	9H0 5000 449	Screw 2x6 TAPP		1
52	9H0 5000 432	HLW cut 2.1x5x0.4		2	108	9D1 8881 307	E stopper spring F	REC/PB	1
53	9D1 8882 109	Trigger arm spring		1	108	9D1 8881 308	E stopper spring F	PB	1
54	9D1 8802 105	Plunger		2	109	9D1 8801 305	E stopper FR collar		1
55	9D1 8802 106	Plunger holder		2					
56	9D1 8882 108	Solenoid		2					
57	9D1 8882 104	P kick lever		1					

# EXPLODED VIEW OF CASSETTE DECK MECHANISM UNIT



A

B

C

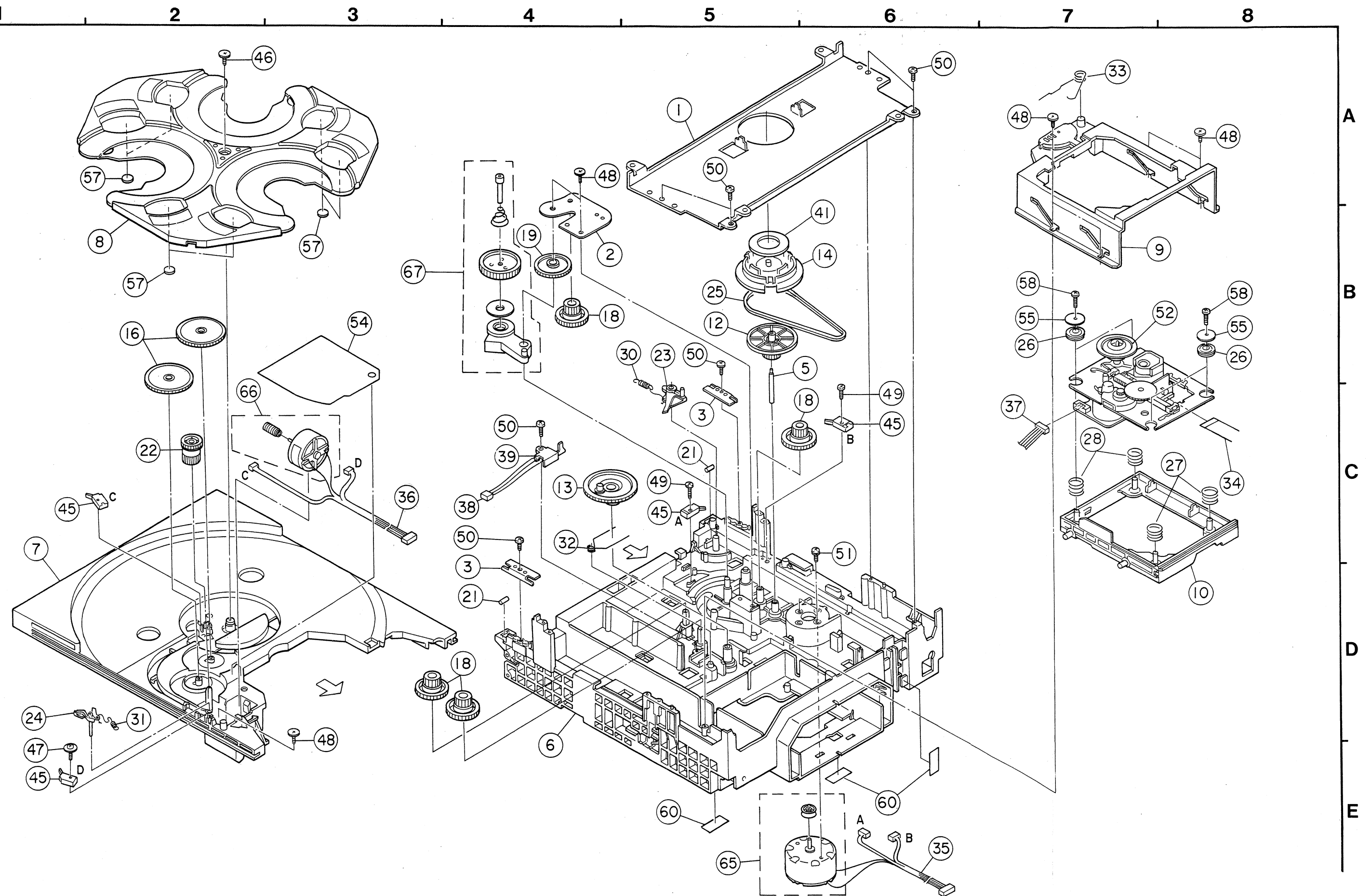
D

E

# PARTS LIST OF EXPLODED VIEW OF CD CHANGER MECHANISM UNIT

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9GC 3B10 07	Clamp bracket		1	53				
2	9GC 3D10 02S	Gear bracket		1	54	9GC 3D80 19	Cover		1
3	9GC 3D10 03S	Tray bracket		2	55	9GC 3D80 18	Washer		4
4					56				
5	9GC 3D20 02	Pulley shaft		1	57	9GC 3D80 15	Sheet tray-B		6
6	9GC 3A30 01S	Main chassis		1	58	932 0023 108	Screw 2x8 B TAPP		4
7	9GC 3A30 02S	Slide tray		1	59				
8	9GC 3A30 03S	Rotary tray		1	60				
9	9GC 3B30 24S	Lift slider		1	61				
10	9GC 3B30 23S	MD-B frame		1	62				
11					63				
12	9GC 3C30 10S	Load pulley		1	64				
13	9GC 3C30 14S	Up/down cam gear		1	65	9GC 3D90 08	Motor Ass'y		1
14	9GC 3B30 28	Clamper		1	66	9GC 3D90 07	Motor Ass'y		1
15					67	9GC 3D30 22	Friction arm Ass'y		1
16	9GC 3D30 08S	Idler gear		2					
17									
18	9GC 3D30 11S	Load gear		4					
19	9GC 3D30 12	Center gear		1					
20									
21	9GC 3D30 15S	Tray roller		2					
22	9GC 3D30 17S	Helical gear		1					
23	9GC 3D30 18S	Lock lever		1					
24	9GC 3D30 29	Brake Lever		1					
25	9GC 3D40 01S	Drive belt		1					
26	9GC 3D40 03	Insulator		4					
27	9GC 3D60 11	Spring MD-G		2					
28	9GC 3D60 12	Spring MD-H		2					
29									
30	9GC 3D60 05	Spring lock		1					
31	9GC 3D60 14	Spring brake		1					
32	9GC 3D60 07	Spring cam		1					
33	9GC 3D60 13	Spring left		1					
34	9GC 3D90 31	FFC cable 16P		1					
35	9GC 3D90 35	Loading wire		1					
36	9GC 3D90 34	Rotary wire		1					
37	9GC 3D90 20	Wire 6P TU-D		1					
38	9GC 3D90 21	Wire 3P		1					
39	9GS 3320 61	SSCF lever switch		1					
40									
41	9GT 9905 44	Magnet		1					
42									
43									
44									
45	9GC 3C90 32	Lever switch		4					
46	9GC 3D80 10	Screw F		1					
47	9GC 3D80 04	Screw B		1					
48	9GC 3D80 05	Screw C		7					
49	932 0022 002	Screw 2x12 B TAPP		2					
50	932 0023 001	Screw 2.6x8 B TAPP		7					
51	9GC 3D80 09	Screw E		2					
52	9G9 0438 002	TR. unit KSM213BCM		1					

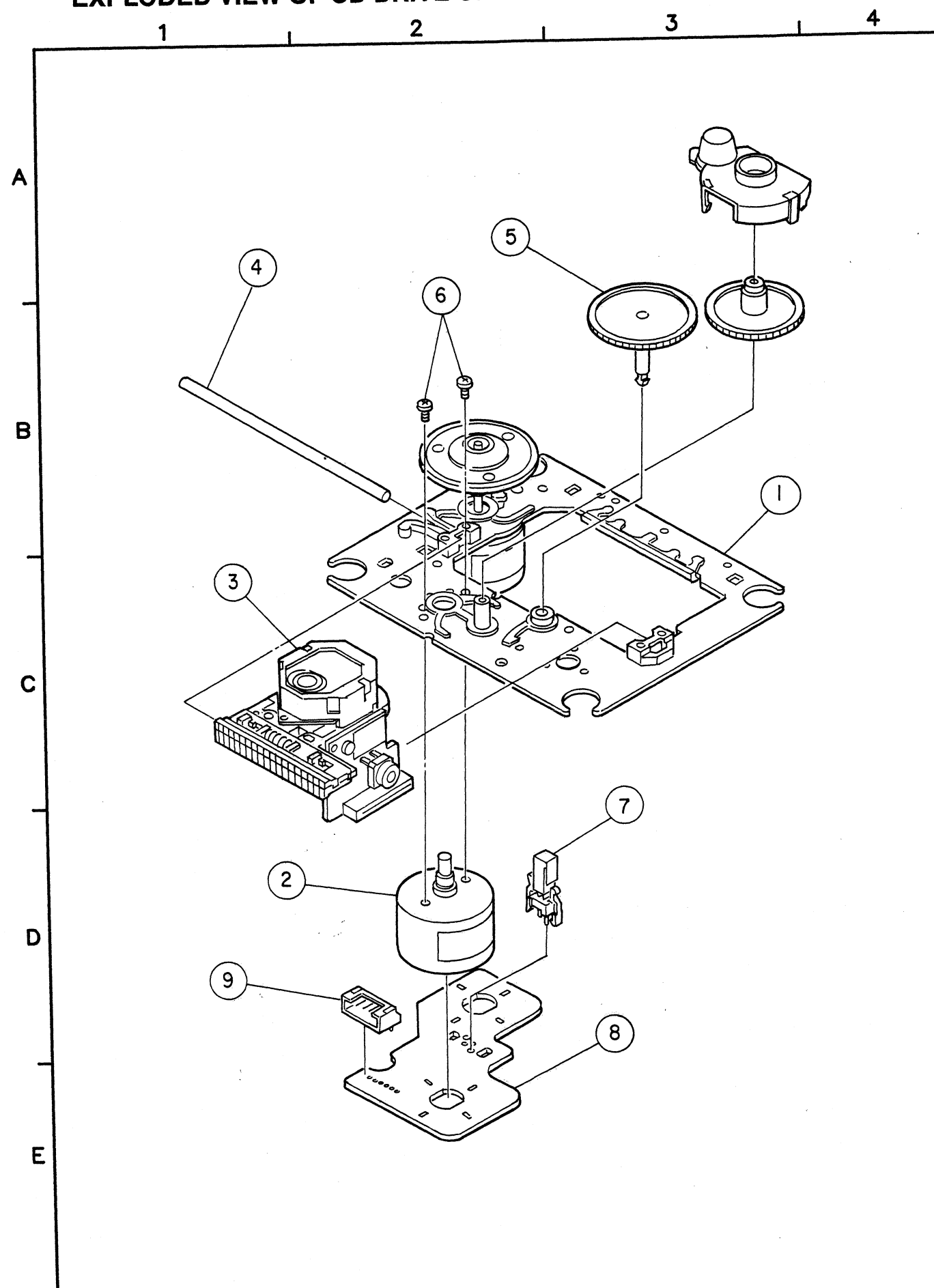
## EXPLODED VIEW OF CD CHANGER MECHANISM UNIT



# **PARTS LIST OF EXPLODED VIEW OF CD DRIVE UNIT**

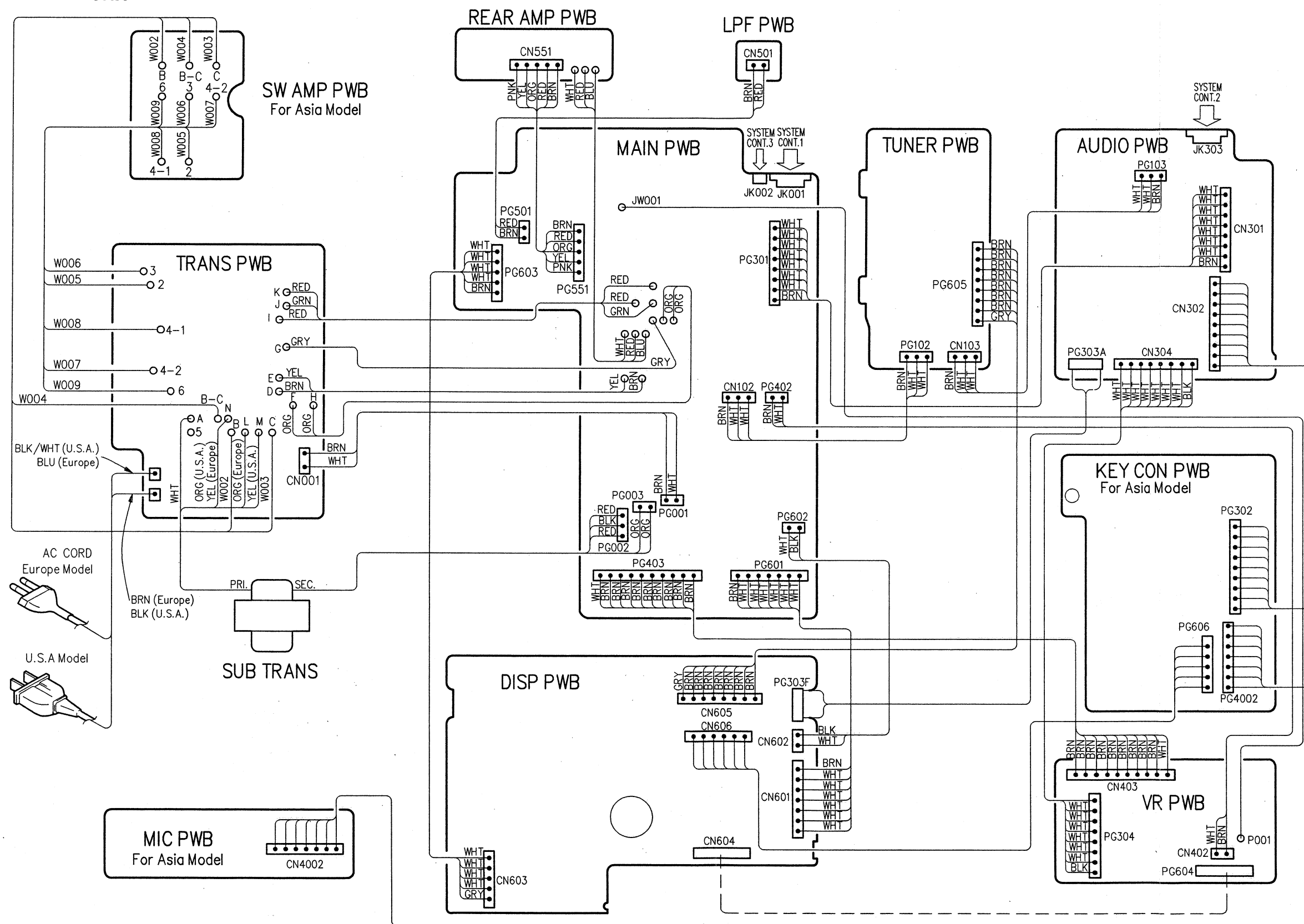
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	SX2 6258 77	Motor Chassis Ass'y		1
2	SX2 6257 69	Motor gear Ass'y		1
3	S88 4837 6	Laser pickup	KSS-213B (PR)	1
4	S26 2690 8	Slide shaft		1
5	S26 2690 7	Gear (A) (S)		1
6	S76 2125 5	Screw 2x3		2
7	S15 7208 5	Reaf switch		1
8	S16 3967 8	Motor (6P) (S) P.W.B.		1
9	S15 6472 2	6P connector (pin)		1

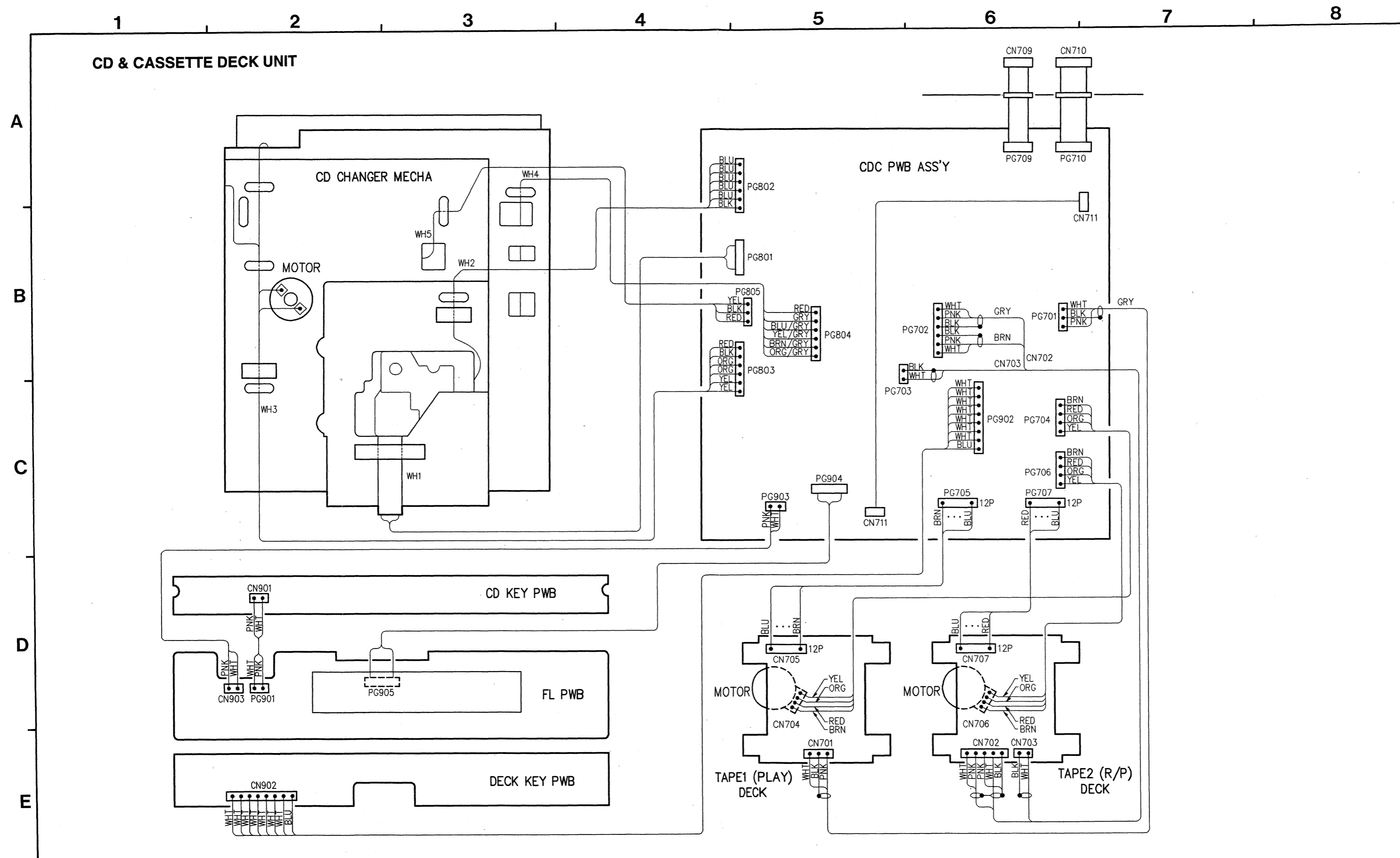
## **EXPLODED VIEW OF CD DRIVE UNIT**



## WIRING DIAGRAM

## AMP & TUNER UNIT



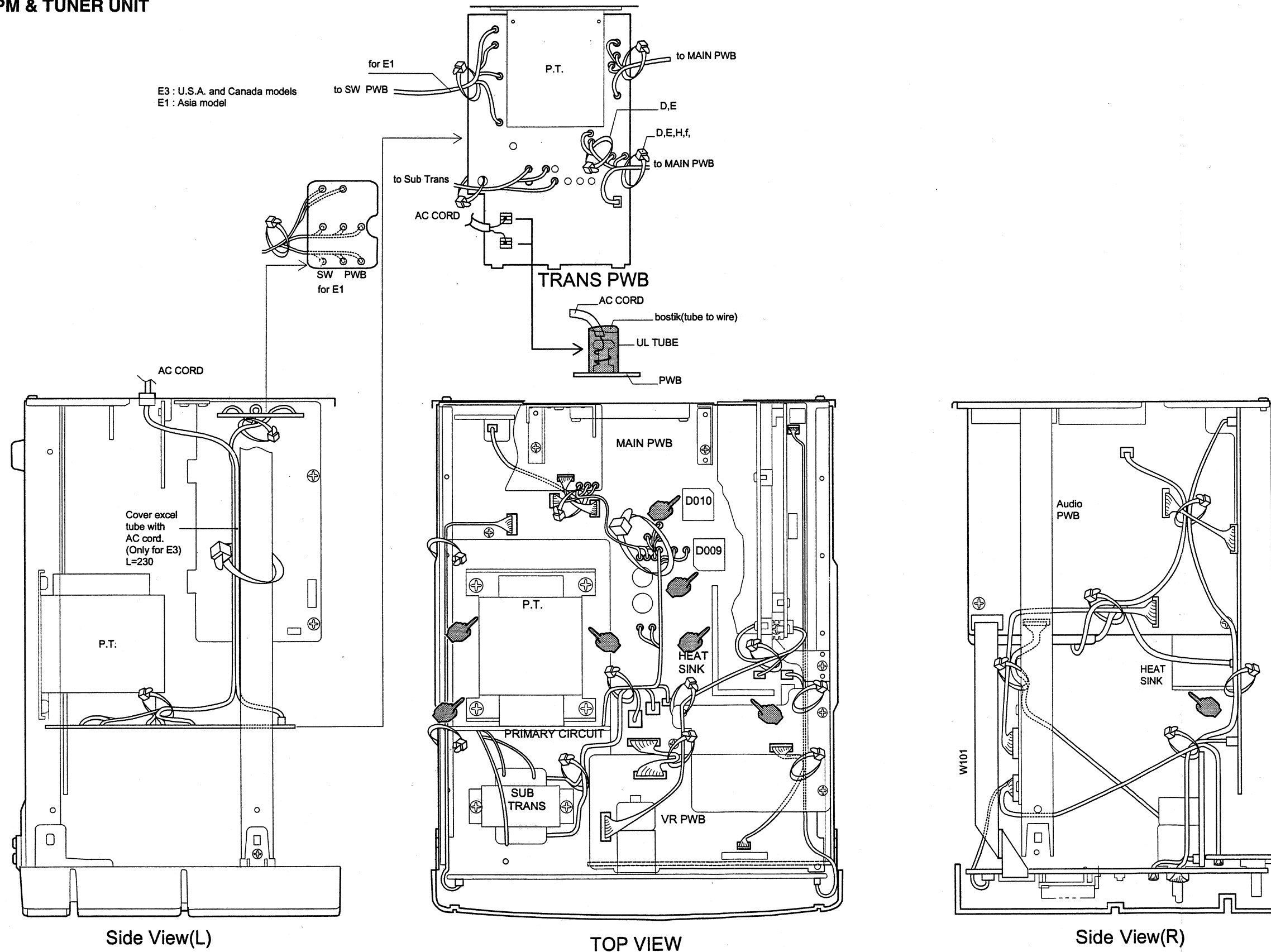


# WIRING STYLE DIAGRAM

1 2 3 4 5 6 7 8

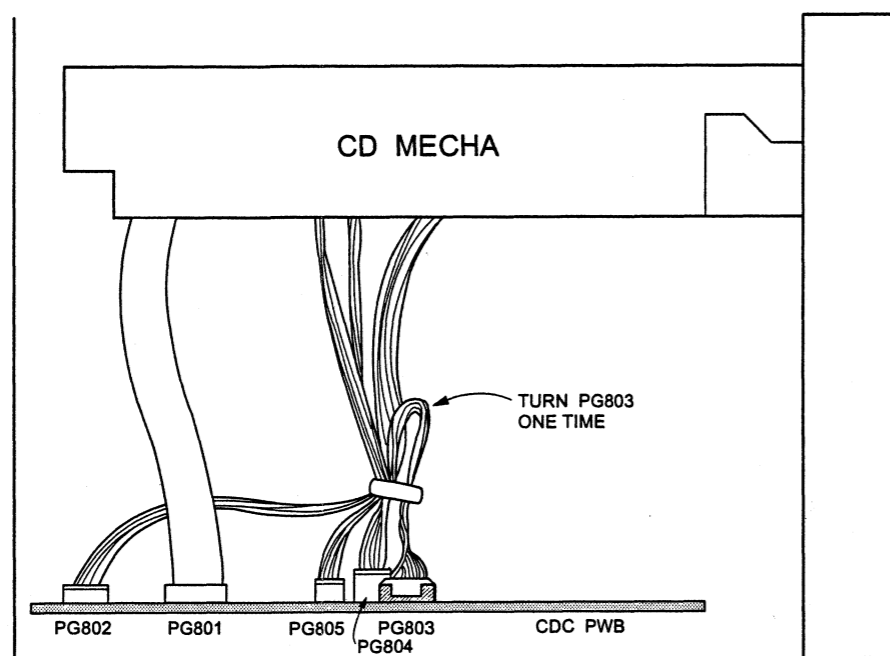
## APM & TUNER UNIT

E3 : U.S.A. and Canada models  
E1 : Asia model

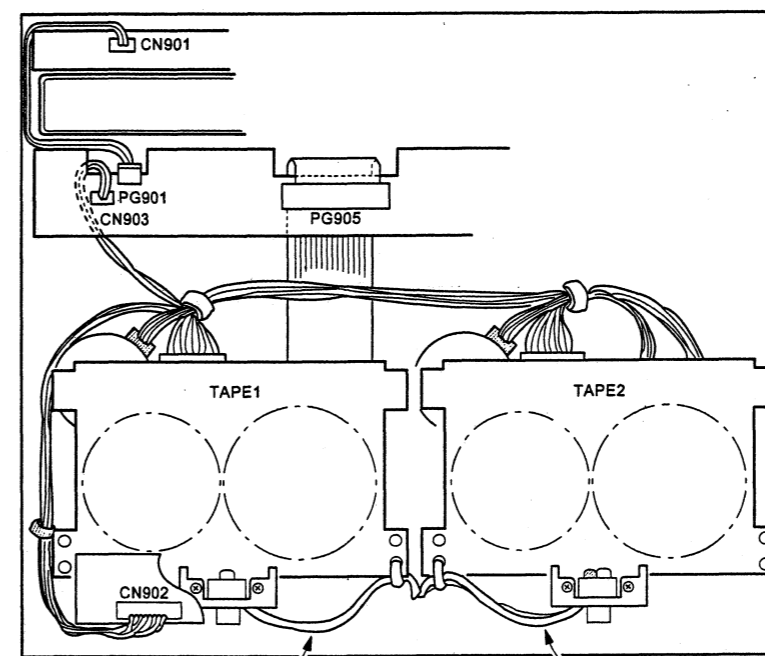


A  
B  
C  
D  
E

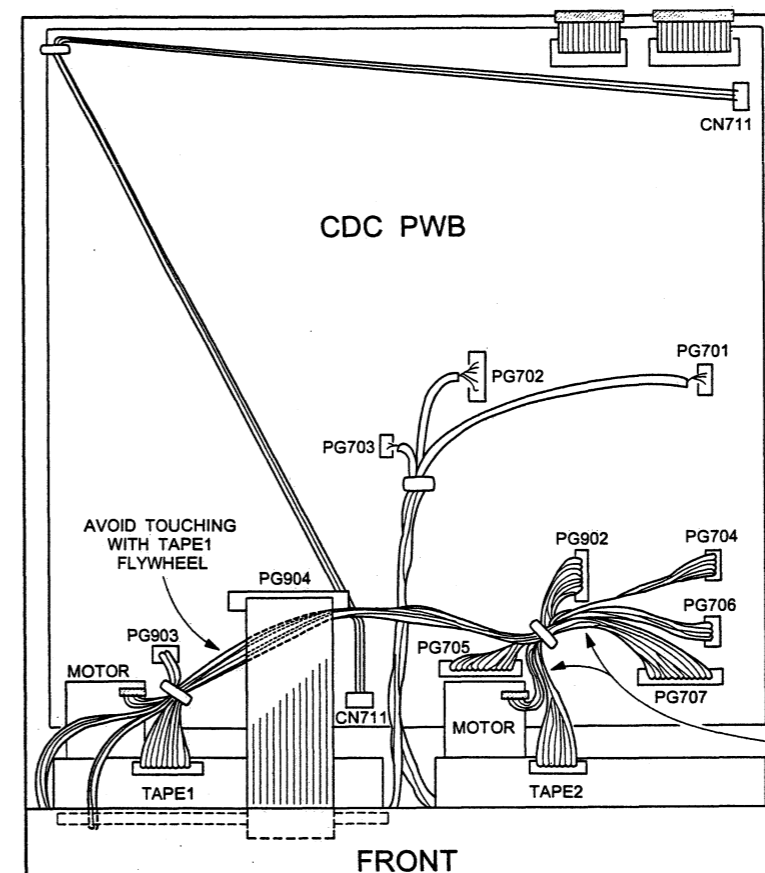
# CD & CASSETTE DECK UNIT



SIDE VIEW



FRONT VIEW



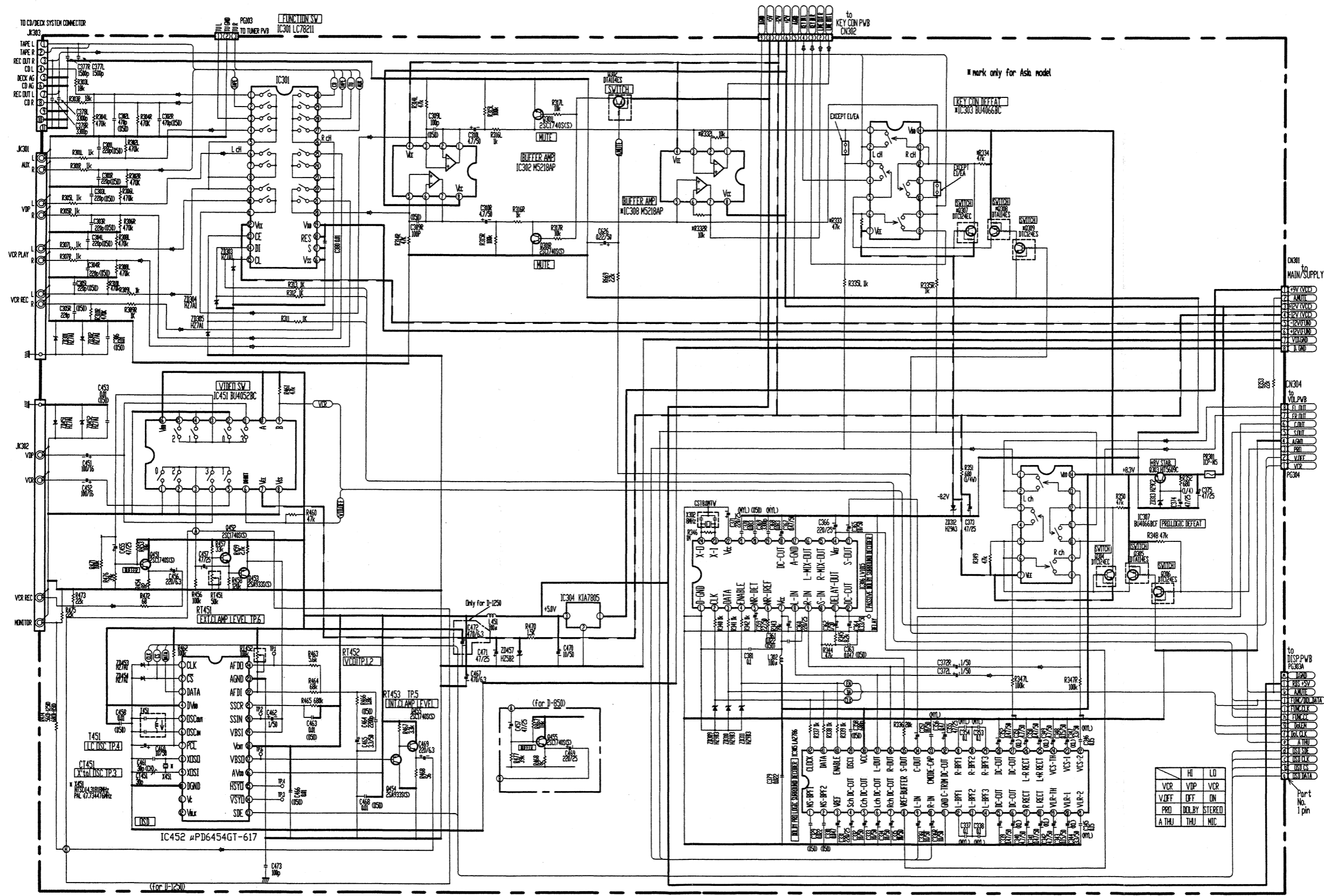
FRONT

TOP VIEW

# SCHEMATIC DIAGRAM (AUDIO CIRCUIT)

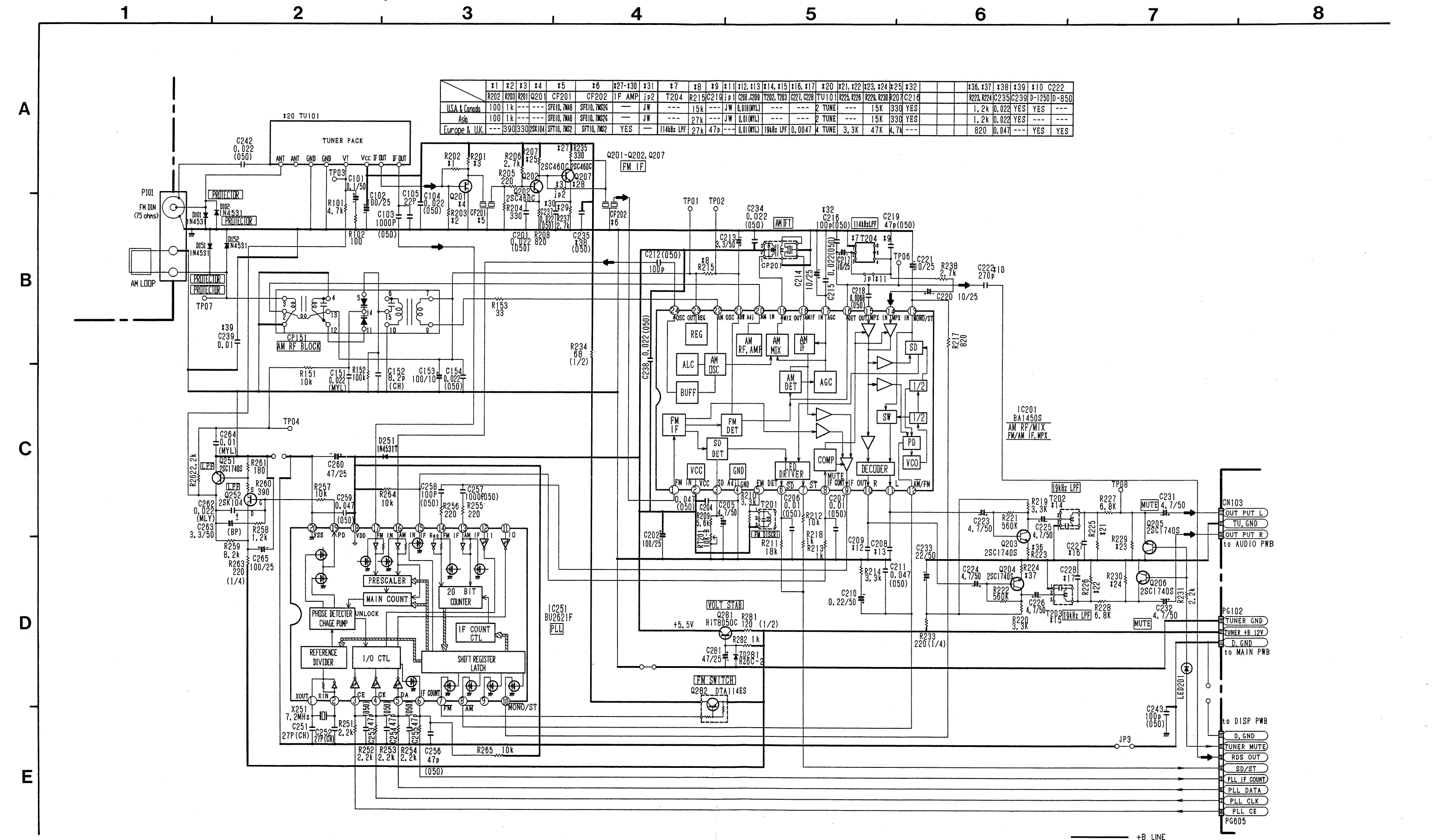
1 2 3 4 5 6 7 8

A  
B  
C  
D  
E



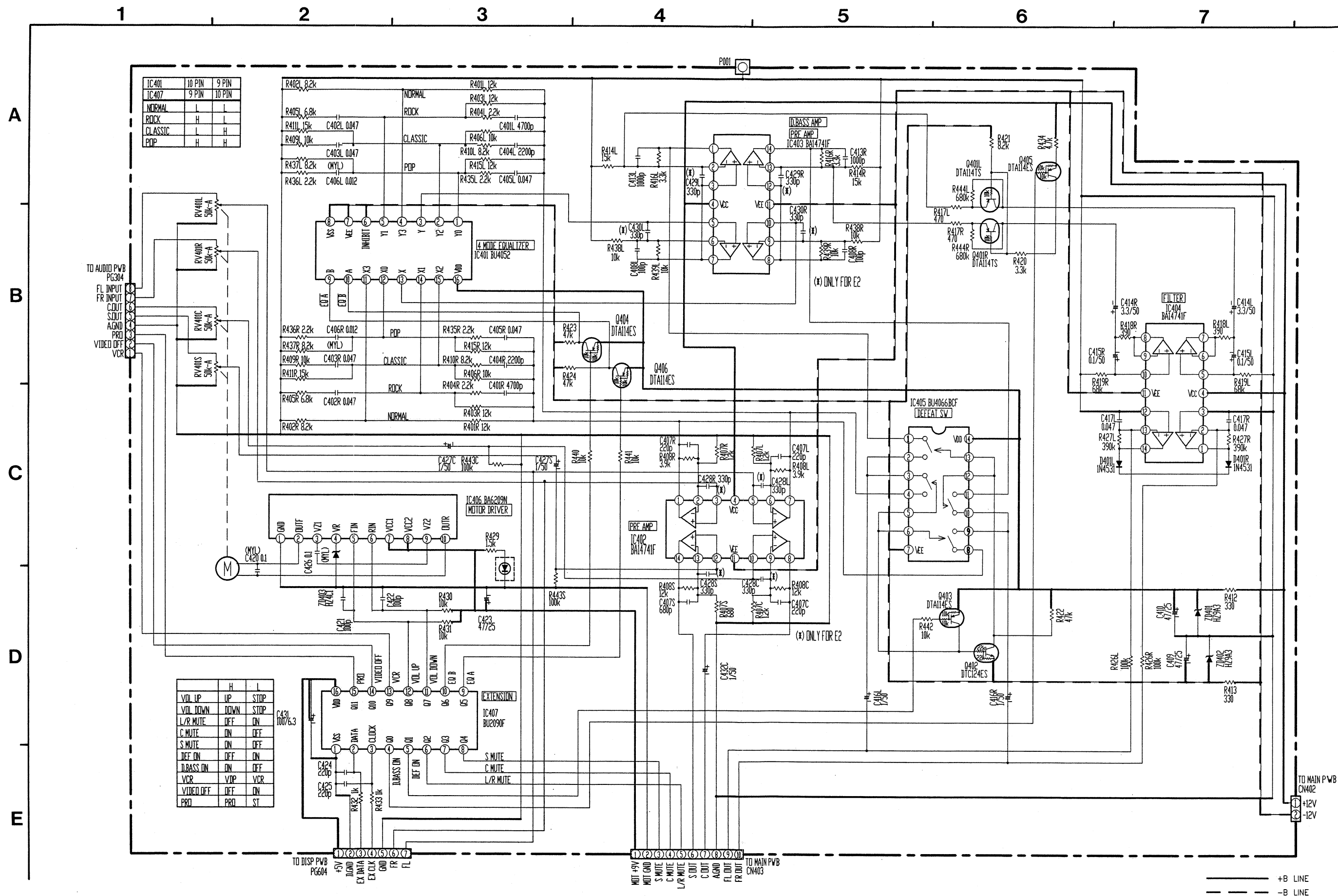
+B LINE  
-B LINE

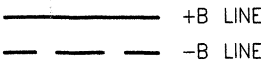
SCHEMATIC DIAGRAM (TUNER BLOCK)



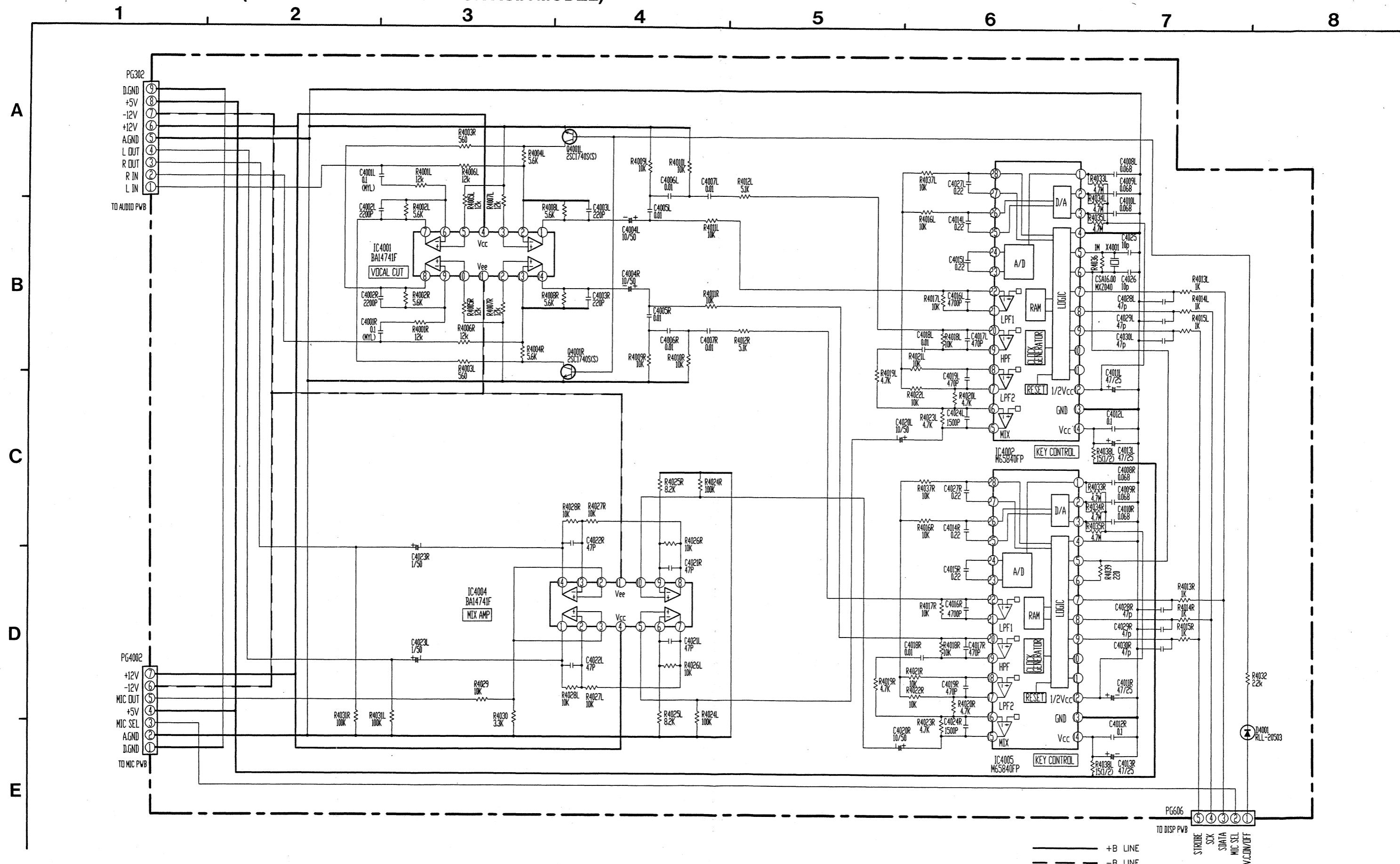


### SCHEMATIC DIAGRAM (VOL./EQ./D.BASS CIRCUIT)

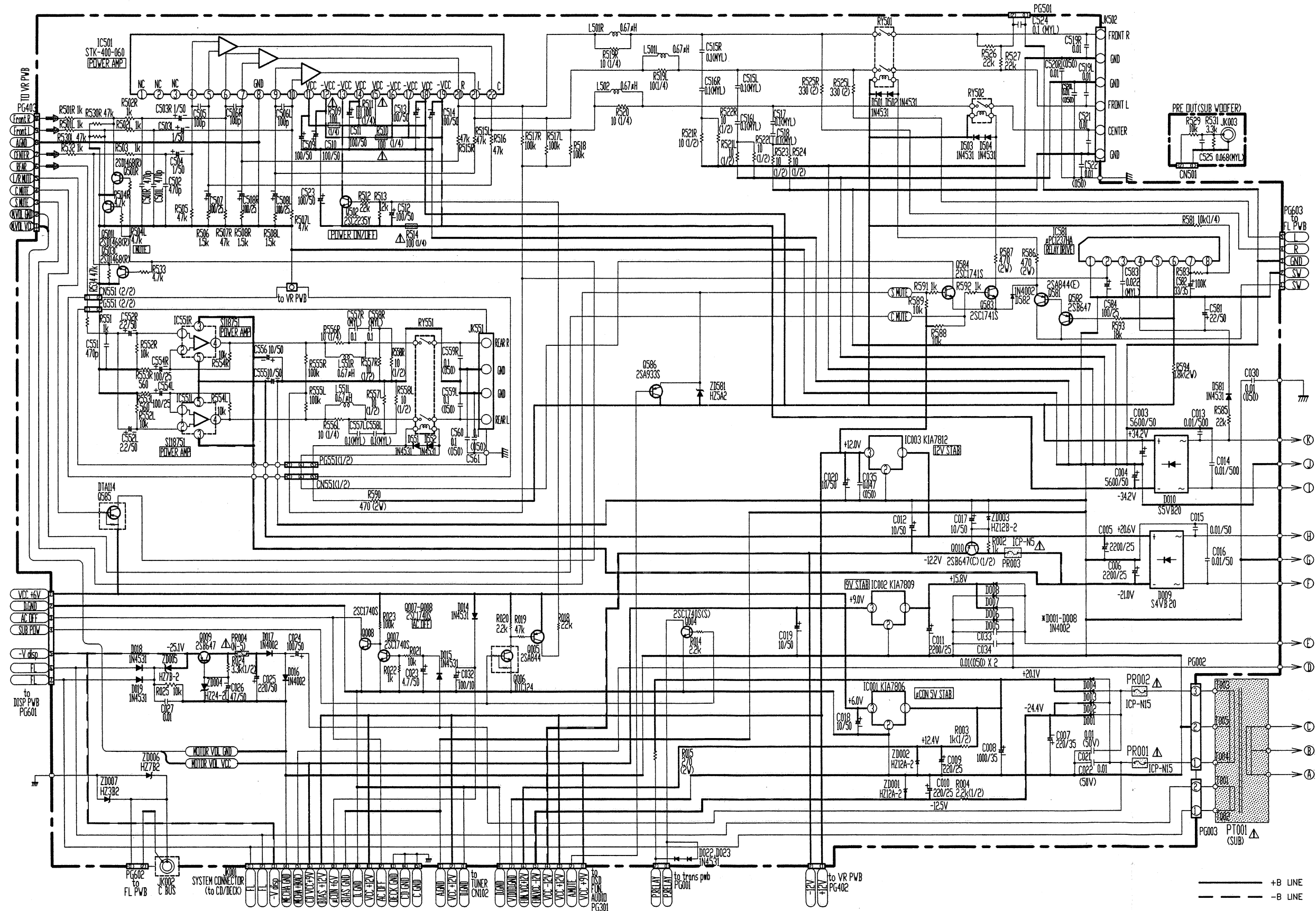




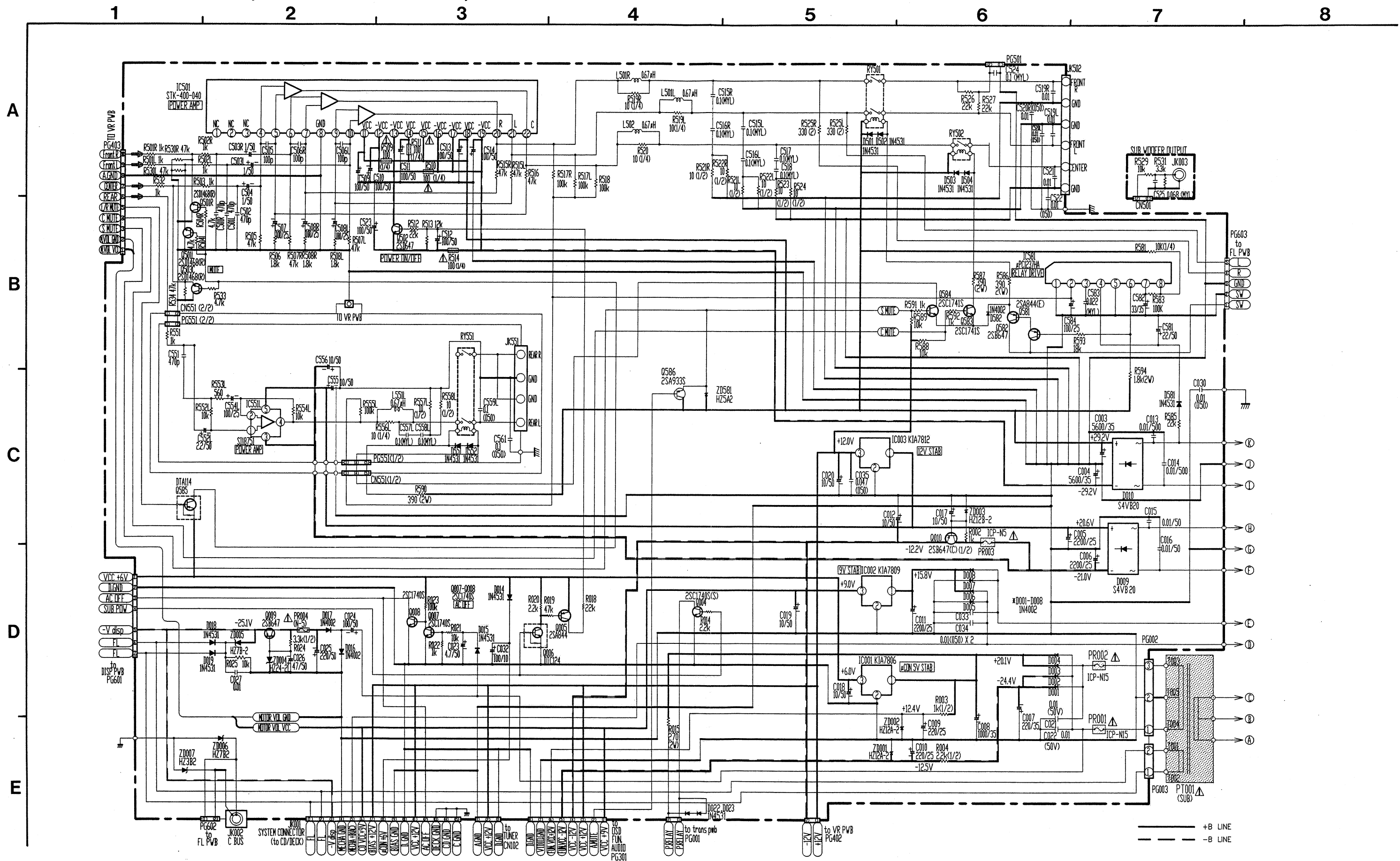
# SCHEMATIC DIAGRAM (KEY CONTROL CIRCUIT FOR ASIA MODEL)



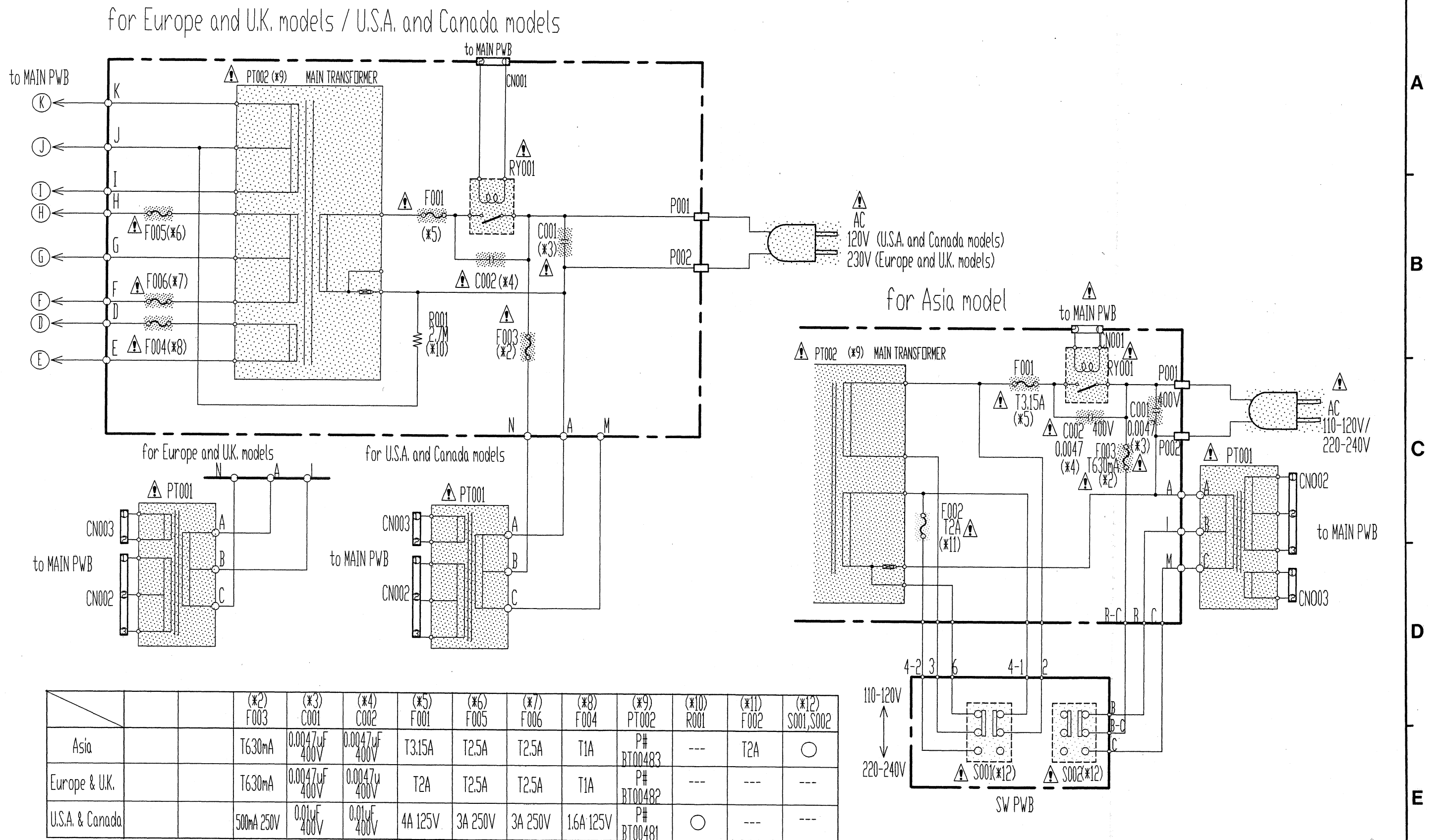
### SCHEMATIC DIAGRAM (MAIN CIRCUIT FOR D-1250)



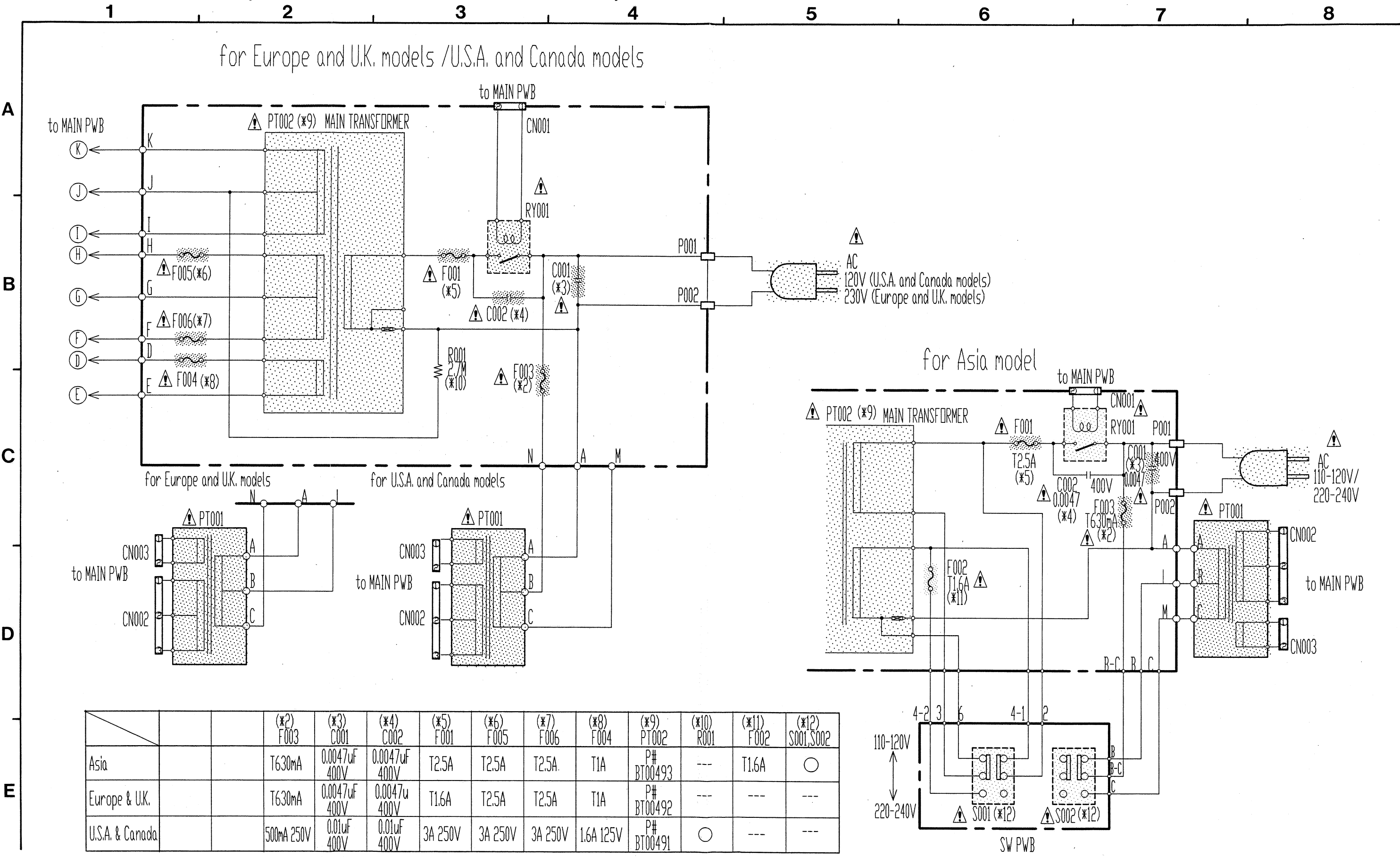
SCHEMATIC DIAGRAM (MAIN CIRCUIT FOR D-850)



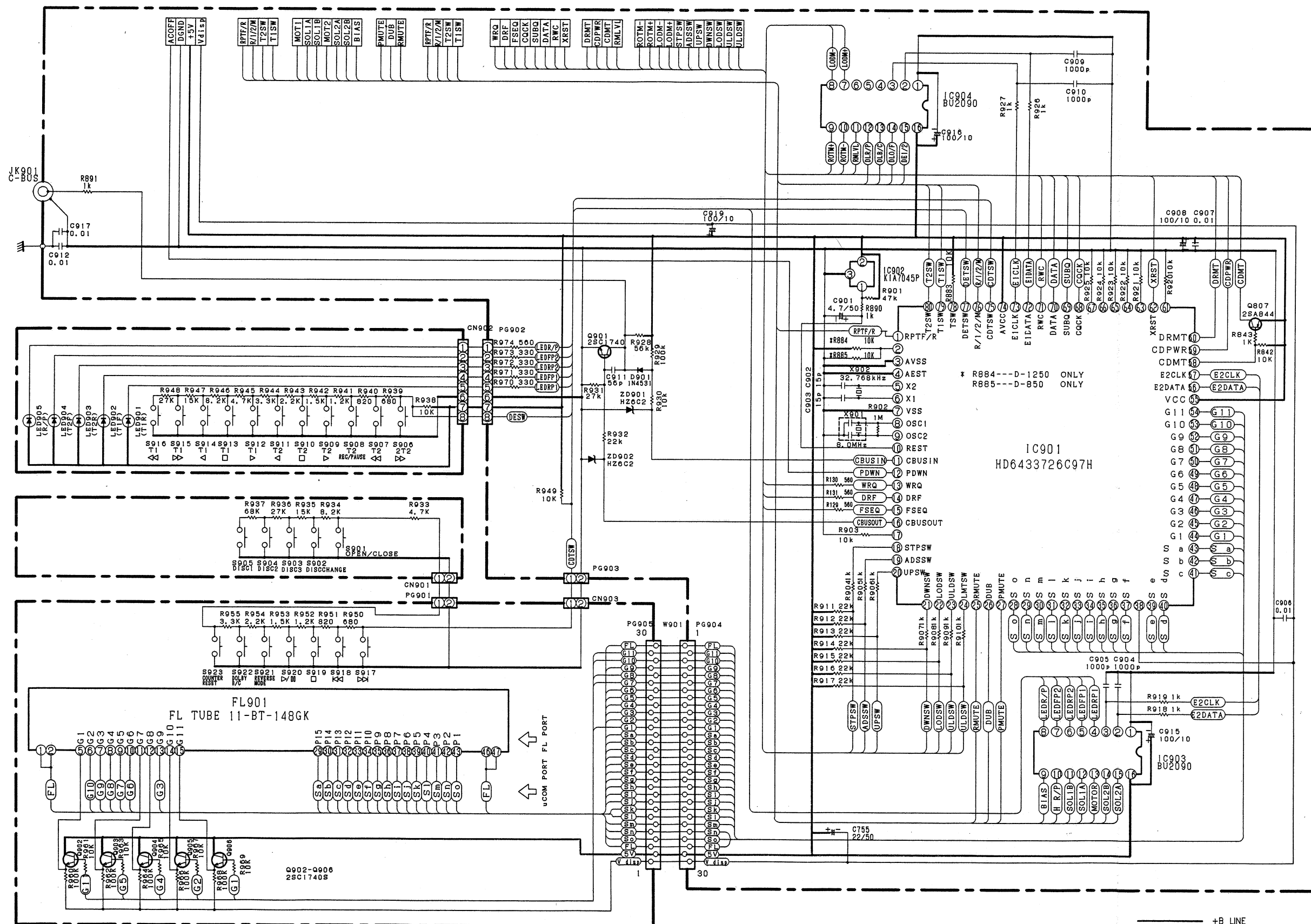
## SCHEMATIC DIAGRAM (POWER TRANSFORMER BLOCK FOR D-1250)



SCHEMATIC DIAGRAM (POWER TRANSFORMER BLOCK FOR D-850)



## SCHEMATIC DIAGRAM (CONTROL SECTION FOR CD &amp; DECK)



A

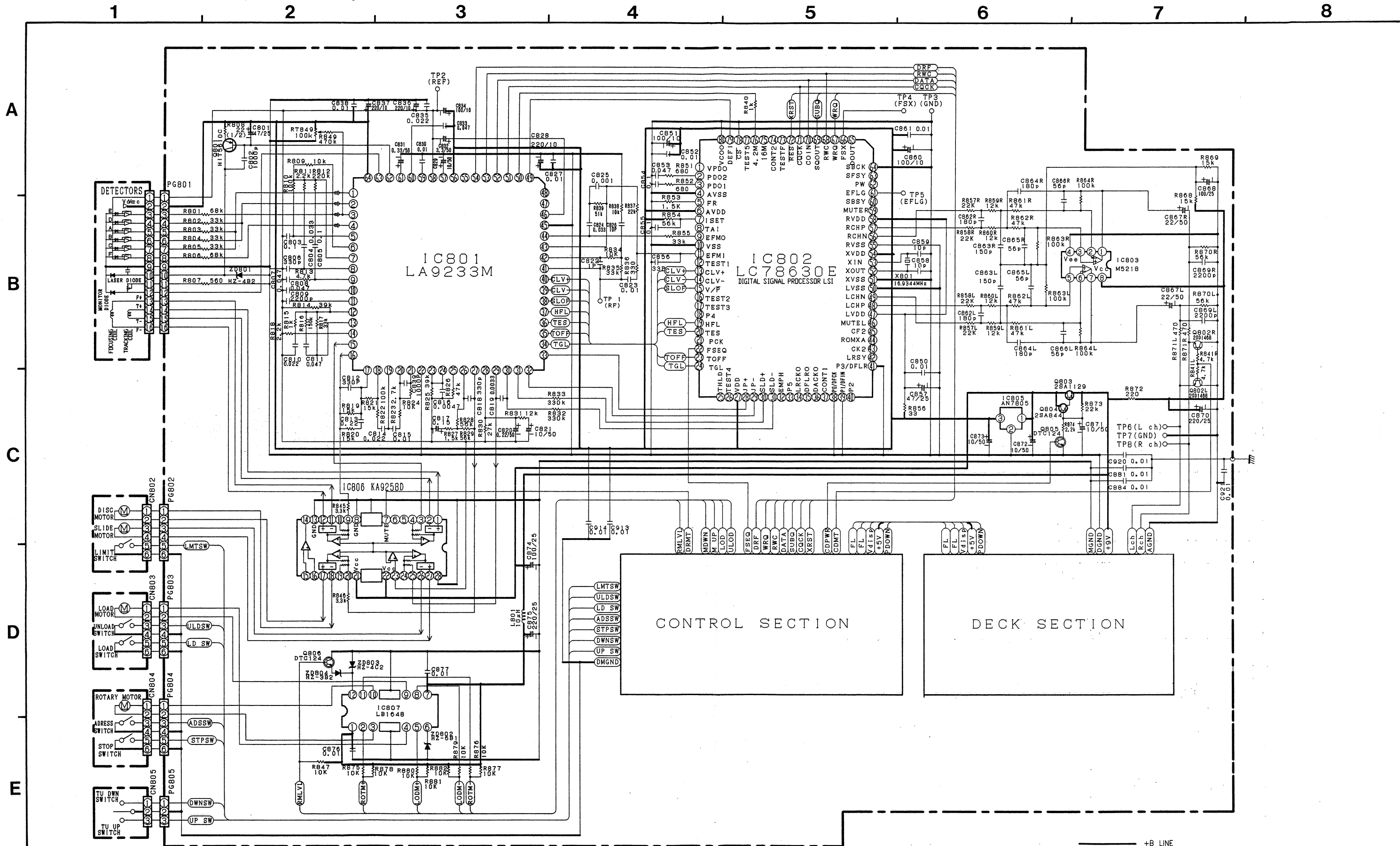
B

C

D

E

SCHEMATIC DIAGRAM (CD SECTION)



### SCHEMATIC DIAGRAM (DECK SECTION)

